

NAVAL RESERVE OFFICERS TRAINING CORPS

INTRODUCTION TO NAVAL SCIENCE



October 2005

NAVAL SERVICE TRAINING COMMAND

SF 100505

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

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NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE

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**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

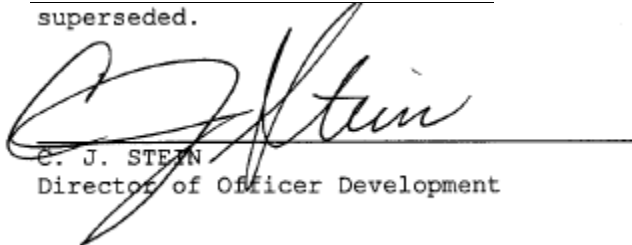
LETTER OF PROMULGATION

This curriculum provides guidelines for introducing midshipmen to the organization of the naval service, the varied career opportunities available, the long-held customs and traditions of the service, basic leadership, ethics and character development, the duties of a junior officer and Navy policies on wellness issues. This course is also designed to begin preparing NROTC midshipmen for their first experience onboard a Navy ship by imparting basic information concerning shipboard procedures and safety. It is not the intent of this course to cover each of these areas in great detail, but rather to stimulate the students' interest for study and investigation in future courses.

This course is designed as a one-semester course to be presented during a student's first term as a fourth-class midshipman. The curriculum may be modified with approval of the Professor of Naval Science provided all professional core competency objectives addressed in this guide are mastered by the midshipmen.

Instructors should promote critical thinking skills throughout this course of instruction and provide opportunities for students to demonstrate progression in both the cognitive and affective domains. Although this course focuses primarily on the cognitive and offers many opportunities for analysis, synthesis and evaluation, this curriculum can also be instructive in the affective domain as students practice valuing, organizing and internalizing aspects of Navy's culture and methods. Instructors are encouraged to use their own past experiences to illustrate and enrich their classroom instruction.

This curriculum guide is approved for implementation upon receipt. Introduction to Naval Science, CNET P1550/5 (4-96), is hereby canceled and superseded.



C. J. STEIN
Director of Officer Development

31 October 2005
Date

DEFINITION OF MEASUREMENT TERMS

(Used in describing desired Professional Core Competencies
and supporting learning objectives)

- I. **Know** - Recall facts, bring to mind and recognize the appropriate material.

Examples:

Know the objectives of damage control aboard ship.

Know the safety procedures used to provide the fullest measure of safe small boat operations.

- II. **Comprehend** - Interpret principles and concepts and relate them to new situations.

Examples:

Comprehend the mission of the U.S. Navy and Marine Corps.

Comprehend the concept of internal forces (e.g., stress, strain, shear).

- III. **Apply** - Utilize knowledge and comprehension of specific facts in new relationships with other facts, theories and principles.

Examples:

Apply correct plotting procedures when navigating in pilot waters.

Apply correct procedures to determine times of sunrise and sunset.

- IV. **Demonstrate** - Show evidence of ability in performing a task.

Examples:

Demonstrate third class swimming skills and fundamental water survival skills.

Demonstrate the correct procedure used in radio-telephone communications.

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PROFESSIONAL CORE COMPETENCY OBJECTIVES

The following professional competency objective statements for this course are from the Professional Core Competency Manual for Officer Accession Programs promulgated in April 2001.

1. Comprehend the interrelationship between authority, responsibility, and accountability within a task-oriented organization.
2. Apply leadership and management skills to prioritize among competing demands.
 - a. Demonstrate ability to establish meaningful goals and objectives.
 - b. Apply techniques of prioritization and time management to resources and personnel.
3. Comprehend the moral and ethical responsibilities of the military leader.
 - a. Comprehend the leader's moral and ethical responsibilities to the organization and society.
 - b. Comprehend the relationship of integrity, moral courage, and ethical behavior to authority, responsibility, and accountability.
 - c. Comprehend the standards of conduct for military personnel.
 - d. Comprehend the current Navy and Marine Corps regulations, policies and programs regarding equal opportunity.
4. Comprehend the relationship of the Navy's Core Values to the role and responsibilities of a naval leader.
5. Comprehend the major principle of the Code of Conduct and be able to apply it to a leader's role in a Prisoner of War situation.
6. Comprehend the following personal qualities and be able to relate them to a leader's effectiveness:
 - a. loyalty
 - b. honor
 - c. integrity
 - d. courage (moral and physical)

7. Know the missions and basic organization of the major components of the U.S. Armed Forces:
 - a. Know the current organization of the Department of the Navy and the relationship of this organization to the National Security Council, the Department of Defense, Joint Chiefs of Staff, and the unified and specified commands.
 - b. Comprehend the missions of the United States Navy and Marine Corps.
 - c. Know the major missions of the U.S. Army, U.S. Air Force, U.S. Coast Guard, and U.S. Merchant Marines.
8. Know the concept of command and control within the armed forces.
9. Know the operational and administrative chains of command within the Department of the Navy.
10. Know each warfare specialty, restricted line specialty, and staff corps community and how each contributes to the missions of the U.S. Navy.
11. Know the customs and traditions of the Navy and Marine Corps and relate them to current usage.
 - a. Know the definition of custom and its origin.
 - b. Know the definition of tradition and its origin.
 - c. Demonstrate the following:
 - (1) Wear the uniform in accordance with appropriate regulations.
 - (2) Correctly demonstrate military courtesy, etiquette, and greetings.
 - (3) Demonstrate proper shipboard protocol with respect to quarterdeck procedures, wardroom etiquette, boarding and disembarking, honors to passing ships, and boat etiquette.
 - (4) Know basic flag etiquette and proper display of basic Navy flags and pennants.
12. Know the Navy and Marine Corps officer and enlisted rank/paygrade structures and insignia. Know the officer ranks in the Army, Air Force, and Coast Guard.
13. Know relevant Navy and Marine Corps unrestricted and restricted line career paths and opportunities including the requirement for joint duty.
14. Comprehend the role of commissioned officers as members of the U.S. Armed Forces and know the obligations and responsibilities assumed by taking the oath of office and accepting a commission including the Constitutional requirement for civilian control.

15. Comprehend the UCMJ, practice of military law, and applications of regulations as they may involve a junior officer in the performance of duties.
 - a. Comprehend the purpose, scope, and constitutional basis of Navy Regulations and the Uniform Code of Military Justice and relate these regulations to personal conduct in the military service.
 - b. Comprehend junior officer responsibilities relative to the military justice system including familiarization with:
 - (1) essential publications relating to military justice
 - (2) non-judicial punishment
 - (3) courts martial
16. Know shipboard command relationships and organization for both operational and administrative environments as prescribed by the SORM.
 - a. Know the shipboard administrative organization including the primary duties of Commanding Officer, Executive Officer, department heads, and division officers.
 - b. Know the organization of the shipboard battle, and peacetime routine watch teams, in port, at anchor, and underway.
 - c. Know the requirements for, and be able to demonstrate, a proper watch relief and the requirements, procedures, and format for keeping logs.
17. Know the basic characteristics and capabilities of the major weapons systems and platforms of the U.S. naval forces.
 - a. Know the designations, characteristics, capabilities, and missions of ships, aircraft, and weapon systems of the U.S. Navy and the Marine Corps.
 - b. Know the mission of the U.S. Merchant Marine relative to national security including its integration with the combat fleet.
 - c. Know the basic methods which potential adversaries can employ to prevent accomplishment of the sea control and power-projection missions of the United States Naval Services.
18. Know the chain of operational command from the National Command Authority to the platform commander.
19. Know terms and nomenclature of shipboard deck seamanship equipment and fittings and the fundamentals of their usage.
 - a. Know the use and safety precautions associated with the following groupings of shipboard equipment:
 - (1) ground tackle, anchoring, and mooring equipment and fixtures,

- (2) boat lifting and handling equipment,
 - (3) weight handling equipment, and
 - (4) fiber and synthetic lines and wire ropes.
 - b. Know responsibilities and safety precautions relative to small boat operations.
20. Know the basics of shipboard safety and comprehend the reasons for extraordinary attention to safety and preparedness.
21. Know the requirements for shipboard damage control training and preparedness.
- a. Know the typical shipboard damage control organization and responsibilities of key personnel assigned.
 - b. Know how shipboard watertight integrity is obtained through installed shipboard features to increase material conditions of readiness.
 - c. Know the procedures, objectives and priorities in combating progressive deterioration from fire and underwater hull damage.
 - (1) Know classes of fire and agents, equipment, and procedures used to extinguish them.
 - (2) Know the use of equipment, materials and procedures for countering progressive flooding and structural deterioration.
22. Know standard procedures to be implemented prior to, during and after a CBR attack.
23. Know the procedures for donning and doffing, and know the proper operation of oxygen breathing apparatus (OBA)/self-contained breathing apparatus (SCBA), Supplemental Emergency Escape Device (SEED), Emergency Escape Breathing Device (EEBD), and standard Navy gas mask.

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INTRODUCTION

This course is designed to be basic and introductory in nature; therefore, each lesson guide is written as a quick overview of the covered topic. Each instructor will find, because of his/her own experience, expertise and subject interest, that certain lessons will easily lend themselves to expansion. While this is an easy temptation, especially when "sea stories" become intermixed, it is very important to ensure that one particular topic does not become the focus of the course. This course must keep moving. The potential volume of material directly applicable to this course is staggering and can easily overwhelm the class (and the instructor). Endeavor to reduce, simplify and present all material at the students' level. The foundation guidelines are always the Professional Core Competencies (PCCs). This course material lends itself to a variety of teaching methods, and the instructor is encouraged to modify the course content and add personal "style" as long as the PCCs are satisfied.

The references listed in this curriculum guide are recommended for use by the instructor. Instructors should be thoroughly familiar with student assignments from the textbooks, handouts and other references/aids. In assigning homework, the instructor should differentiate between the pages or articles that the student should carefully study and those that may be scanned for familiarization only. The instructor is also encouraged to provide handouts whenever possible. Handouts and lesson presentations are included on a CD-ROM distributed to new instructors by the Course Coordinator. This material is meant to serve as a guide. It is the instructor's responsibility to ensure all PCCs for this course are covered adequately.

Lesson topics are grouped into related major areas. The sequence begins with a broad overview, and then focuses more on individual topics. Instructors are allowed to shift the sequence as required to derive maximum benefit from guest speakers, field trips, or other unit education and training activities. Recent graduates of the unit, if available, can be a valuable addition to the presentations. Their experience in the training pipeline can be very helpful in generating interest in the subject matter.

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LESSON TOPICS

<u>Lesson</u>	<u>Title</u>	<u>Hours</u>
1	DOD Organization and the Mission and Organization of the Armed Forces.....	1.0
2	Mission and Organization of the USN, USNR & USMC	2.0
3	Mission, Academic Requirements, and Regulations of the NROTC Program.....	2.0
4	U.S. Navy Enlisted Rating Structure and DoD Ranks, Uniforms and Insignia	2.0
5	Naval Traditions, Customs, Honors and Courtesy	2.0
6	Navy Regulations and the UCMJ.....	1.0
7	Study Skills and Time Management.....	1.0
8	Shipboard Organization and the Military Duties of a Naval Officer.....	1.0
9	Deck Seamanship/Shipboard Safety.....	2.0
10	Damage Control Overview.....	1.0
11	Damage Control Systems and Equipment.....	1.0
12	Surface Warfare Community.....	2.0
13	Submarine Warfare Community.....	2.0
14	Aviation Community.....	2.0
15	Other Officer Communities.....	1.0
16	Basic Leadership and Personal Leadership Qualities.....	1.0
17	DON Standards and Policies	2.0
18	Followership/Knowledge Requirements/ Case Studies.....	2.0
19	Empowerment/Proactivity.....	2.0
20	Basic Correspondence.....	<u>0.5</u>
Total Hours:		30.5

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INSTRUCTIONAL AIDS

I. Videos

A. The following videos are part of the official curriculum and have previously been distributed to each unit:

<u>SAVPIN Number</u>	<u>Title</u>	<u>Running Time (min.)</u>	<u>Lesson</u>
23521	A Few Good Men (Commercial).....	25	2
	Aircraft Carrier (Commercial).....	60	8
804635	Beating the Odds: The <i>USS Samuel B. Roberts</i> Fights for Life.....	18	11
60307075	Carrier Battle Group, The.....	20	14
805233	Desert Storm-Navy/Marine Corps Team..	19	2
N0443-95-0016	Fast-Attack Submarines of Hampton Roads.....	27	13
806381	Fire on the Flight Deck.....	26	11
22002	Flight Deck/Air Power (Commercial)..	48	14
25563	Flight - The Romance of Naval Aviation.....	8	14
806493	I Am . . . A Navy Nurse	16	15
805754	Joint Warfare of the U.S. Armed Forces.....	11	1
803007	Making The Navy Move: The Supply Corp	12	15
800578	Navy Health Care Team, The	17	15
803664	Navy Physician, The	17	15
22036	Ready on Arrival.....	29	14
802298	Sea Warriors.....	12	12
803565	Someone Special: A Career in Navy Special Warfare.....	26	15
804957	Study Skills Instruction, USNA.....	45	7
82971	Synthetic Line Snapback.....	20	9
805240	Today's Submarine Force.....	19	13
25748	Trial by Fire.....	26	10
B0000063KP	Warship (Commercial).....	30	12
25828	Wings of Eagles, Wings of Gold.....	28	14

B. The above videos should be controlled and serialized as part of the unit's standing educational materials to ensure they are available for future courses of instruction. It is the responsibility of the unit to keep track of the location of the videos and to maintain them in good working condition. Replacements for damaged videos may be ordered from the NETPDTC Regional Visual Information Center by contacting Mr. Ron Burk at ronald.burk@navy.mil or (850) 452-1001, ext 2020.

C. The Course Coordinator may be contacted for assistance in locating other video resources. Some videos may be obtained from university or community libraries, online vendors, online in public domain areas (without cost), or purchased by the unit through commercial vendors. (**NOTE:** When purchasing videos, units should consider the

copyright laws that allow video usage for educational purposes/classroom use only.)

- D. **Instructors should be aware that commercial videos provided by NSTC or purchased by the unit are for use in an academic setting only. They are not to be reproduced, sold, copied, or shown in their entirety. Academic privileges allow instructors to utilize portions of videos, books, articles available to the public, and other media in academia to teach and educate. Using or distributing these videos in any fashion other than outlined here and in the lesson plans may constitute copyright infringements. Many short video clips from commercial movies provide the instructors contemporary, intriguing material to provide the students with examples of the ethical issues they are trying to teach. Use these segments appropriately. Seek official legal advice for any use not mentioned in this guide. Additional guidance may be found in SECNAVINST 5870.4.**
- E. There are various online vendors and resources instructors may consult when looking for video resources for educational purposes. Recommended are resources available on various educational institution websites; archived resources at television station web sites, such as ABC News archived videos at: <http://abcnews.go.com/index.html>; or government and military-related issues archived by C-SPAN at: <http://www.c-span.org/>, which may come at little or no cost. (NOTE: Although materials may be available via the World Wide Web, standard laws of copyright still exist. Instructors should use all materials in accordance with Fair Use Guidelines. See cautions noted in paragraph II below.)
- F. Most universities have video libraries or audiovisual organizations that can provide current, topical films to units at no cost. These universities may also have additional funding or arrangements to purchase video rights and rental for use in the classroom environment. Consult with your university's film librarian to locate additional films to support lesson plans.
- G. A wide variety of Department of Defense (DOD) materials is available through the Defense Automated Visual Information System/Defense Instructional Technology Information System (DAVIS/DITIS) website at: <http://dodimagery.afis.osd.mil>. This site contains listings and descriptions of thousands of audiovisual productions/videotapes and interactive multimedia instructional products used by DOD. The NETPDTC Norfolk Regional Electronic Media Center may also be able to provide desired multimedia resources, by contacting Mr. Ron Burk at ronald.burk@navy.mil or (850) 452-1001, ext. 2020.

II. Internet Resources. **Note that all personnel must exercise caution in using material downloaded from the Internet. Access to works on the Internet does not automatically mean that these may be reproduced and reused without permission or royalty payment. Before using any materials downloaded from the Internet for use in training, you must determine what, if any, copyright restrictions might apply. A good rule of thumb would be to presume that any information on the Internet is copyrighted, and that you should not use it without obtaining permission from the**

copyright holder. SECNAVINST 5870.4 provides specific guidelines that should be addressed in the copyright permission request letter.

- III. Course Coordinator CD-ROM -- Includes PowerPoint presentations for each topic, sample exams, quizzes, homework suggestions, and slides to enhance the lessons. (Contact current *Introduction to Naval Science* Course Coordinator to obtain copy.)

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

BIBLIOGRAPHY

I. Student Texts (1 per student, 1 per instructor)

Bowman, Eric D. Academic Effectiveness: A Manual for Scholastic Success for Naval Reserve Officer Training Corps. 2nd ed. Dubuque, IA: Kendall/Hunt Publishing Company, 1994.

Cutter, Thomas J. The Bluejacket's Manual. Centennial ed. Annapolis, MD: Naval Institute Press, 2002.

Mack, William P., Harry A. Seymour, Jr., and Lesa A. McComas. The Naval Officer's Guide. 11th ed. Annapolis, MD: Naval Institute Press, 1998.

Markham, Kathy. In and Out of Harm's Way: A Nurse Corps History. Seattle: Peanut Butter Publishing, 1996. (For Nurse Corps midshipmen only.)

Naval Education and Training Command. Principles of Naval Engineering, NAVEDTRA 12960. Washington, D.C.: Naval Education and Training Program, 1992.

II. Student Resources (1 per every 3-5 students, 1 per instructor)

Estes, Kenneth W. The Marine Officer's Guide. 6th ed. Annapolis, MD: Naval Institute Press, 1995.

III. Instructor References (1 per instructor)

A. Texts

A Commander's Quick Reference Manual for Legal Issues. Naval Justice School, Newport, RI, 2004.

Bissell, A. E., J. E. Oertel, and D. J. Livingston. Shipboard Damage Control. 2nd ed. Annapolis, MD: Naval Institute Press, 1976. (No longer being printed but copies remain available from NSTC.)

Blank, David A., Arthur E. Bock, and David J. Richardson. Introduction to Naval Engineering. 2nd ed. Annapolis, MD: Naval Institute Press, 1985.

Cagle, Malcolm W. Naval Aviation Guide. 5th ed. Edited by Richard C. Knott. Annapolis, MD: Naval Institute Press, 1996.

Cutler, Deborah W., and Thomas J. Cutler. Dictionary of Naval Abbreviations. 4th ed. Annapolis, MD: Naval Institute Press, 2004. (Not referenced in a specific lesson but provided for general use.)

Cutler, Deborah W., and Thomas J. Cutler. Dictionary of Naval Terms. 6th ed. Annapolis, MD: Naval Institute Press, 2004. (Not referenced in a specific lesson but provided for general use.)

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Montor, Karel. Ethics for the Junior Officer. Annapolis, MD: Naval Institute Press, 1994.

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Sharp, Richard, Captain, RN, ed. Jane's Fighting Ships. Alexandria, VA: Jane's Information Group, 2003-04. (Obtain from the Weapons course.)

Stavridis, James. Division Officer's Guide. 11th ed. Annapolis, MD: Naval Institute Press, 2004.

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U.S. Naval Academy. Naval Law. 3rd ed. Annapolis, MD: Naval Institute Press, 1997. (Obtain from the Leadership and Ethics course.)

B. Instructions/Directives/Publications (Not provided by NSTC. Most are available online at <http://neds.daps.dla.mil/>, <http://www.usmc.mil/directiv.nsf/>, <http://www.npc.navy.mil/> or http://www.bupers.navy.mil/pers8/PERS-83/na3_94.pdf.)

CNETINST 1533.12 (Series), "Regulations for the Administration and Management of the Naval Reserve Officers Training Corps (NROTC)"

CNET P1533/3 (Series), "Naval Reserve Officers Training Corps Administrative Manual (NAM)"

DOD Directive 5500.7 (Series), "Standards of Conduct"

DOD 5500.7-R, "Joint Ethics Regulation (JER)"

Department of the Navy, U.S. Navy Regulations, 1990. (Available online at: <http://neds.daps.dla.mil/regs.htm>.)

JAGINST 5800.7 (Series), Manual of the Judge Advocate General (JAGMAN)

Joint Publication 1, "Joint Warfare of the Armed Forces of the United States" (latest edition). Washington D.C.: National Defense University Press. (Available online at http://www.dtic.mil/doctrine/jel/new_pubs/jp1.pdf.)

Manual for Courts-Martial, United States (MCM)

Marine Corps Order (MCO) P1020.34 (Series), "Marine Corps Uniform Regulations"

NAVADMIN 209/04, "Navy Uniforms"

Naval Doctrine Command. Naval Warfare. Naval Doctrine Publication 1. Washington, D.C.: GPO, 1994. (Available at: www.dtic.mil/doctrine/service_publications_navy_pubs.htm.)

Naval Doctrine Command. Naval Intelligence. Naval Doctrine Publication 2. Washington, D.C.: GPO, 1995. (Available at: www.dtic.mil/doctrine/service_publications_navy_pubs.htm.)

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NAVPERS 15665I, "U.S. Navy Uniform Regulations" (Available online at http://buperscd.technology.navy.mil/bup_updt/508/unireg/uregMenu.html.)

NAVPERS 18068 (series), "Manual of Navy Enlisted Manpower Personnel Classification and Occupation Standards" (Sections 1 and 2)

OPNAVINST 3111.14 (Series), "Homeports and Permanent Duty Stations; Establishment, Disestablishment and Modification of Activities of the Operating Forces of the Navy"

OPNAVINST 3120.32 (Series), "Standard Organization and Regulations Manual (SORM) of the U.S. Navy"

OPNAVINST 6110.1 (Series), "Command Physical Readiness Test Summary"

SECNAVINST 5216.5 (Series), "Department of the Navy Correspondence Manual" (Available online at http://neds.daps.dla.mil/Directives/5216_5d.pdf.)

SECNAVINST 5370.2 (Series), "Standards of Conduct and Government Ethics"

SECNAVINST 7220.65 (Series), "Nuclear Officer Incentive Pay"

U.S. Department of the Navy. Forward...From the Sea. Washington D.C.: GPO, 1992. (Available at: www.chinfo.navy.mil/navpalib/policy/fromsea/ffseanoc.html.)

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Aerospace Maintenance Duty Officer prospectus

Naval Engineering Duty prospectus

Naval Officer, Chaplain Corps prospectus

Naval Officer, Civil Engineer Corps prospectus

Naval Officer, Cryptology (Special Duty Officer) prospectus

Naval Officer, Dental Corps prospectus

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Naval Officer, Medical Corps prospectus

Naval Officer, Medical Facilities Guide

Naval Officer, Medical Service Corps prospectus

Naval Officer, Nuclear-Trained prospectus

Naval Officer, Nurse Corps prospectus

Naval Officer, Supply Corps prospectus

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D. Websites:

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LINK-Perspective at: <http://www.npc.navy.mil/ReferenceLibrary/Publications/LinkPerspective/>

U.S. Navy Fact File at:
www.chinfo.navy.mil/navpalib/factfile/ffiletop.html

E. Optional Resources -- Not provided by NSTC.

Knight, Austin M. Knight's Modern Seamanship. 17th ed. Revised by John V. Noel, Jr. New York: Van Nostrand Reinhold Company, 1984.

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Navy Core Values Instructor Guide. (Instructors may find this resource very useful, if a copy remains available at the unit. It was previously provided to the units, but additional copies are no longer available.)

U.S. Department of the Navy, Naval Education and Training Command.
NROTC Leadership and Ethics Student Guide, CNET P1550/8 (Rev. 6-93). (Instructors may find this resource very useful, if a copy remains available at the unit. It was previously provided to the units, but additional copies are no longer available.)

United States Government Manual, The. Office of the Federal Register, National Archives and Register Service, General Services Administration. GPO, 2001-02.

**NAVAL RESERVE OFFICERS TRAINING CORPS
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LESSON GUIDE: 1

HOURS: 1.0

TITLE: DOD Organization and the Mission and Organization of the Armed Forces

I. Learning Objectives

- A. The student will know the current organization and missions of the Department of Defense, and the relationship of this organization to the Armed Forces, the National Security Council, Joint Chiefs of Staff, and unified and specified commands.
- B. The student will know the major missions of the U.S. Army, U.S. Air Force, and U.S. Coast Guard.
- C. The student will know the major organizational components of the U.S. Army, U.S. Air Force, and U.S. Coast Guard.
- D. The student will know the mission and organization of the U.S. Merchant Marine as an element of national defense preparedness.
- E. The student will comprehend the role of commissioned officers as members of the U.S. Armed Forces and know the obligations and responsibilities assumed by taking the oath of officer, accepting a commission, and the constitutional requirement for civilian control.
- F. The student will comprehend the concept of command and control as an exercise of authority and direction by a properly designated commander over assigned forces in the accomplishment of a mission.
- G. The student will know the concepts of naval command and control within the Armed Forces.
- H. The student will know the chain of operational command from the National Command Authority to the platform commander.

II. References and Texts

A. Instructor references

- 1. Naval Orientation, pp. 1-1 through 1-14, 11-1 through 11-11
- 2. Forward...From the Sea
- 3. The Naval Officer's Guide, Chapter 12
- 4. Bluejacket's Manual, Chapter 1, Appendix A
- 5. Joint Warfare of the Armed Forces of the United States, Joint Pub 1

6. U.S. Government Manual (optional)
- B. Student texts
 1. The Naval Officer's Guide, Chapter 12
 2. Bluejacket's Manual, Chapter 1, Appendix A
- III. Instructional Aids
 - A. Course Coordinator CD-ROM
 - B. Computer/projection system
 - C. Whiteboard/chalkboard
 - D. Video: "Joint Warfare of the U.S. Armed Forces," 11 min
 - E. VCR/Monitor
- IV. Suggested Methods and Procedures
 - A. Method options: Distribute handouts for students on the organizational chart and chain of command. (Available on Course Coordinator CD-ROM as part of PowerPoint slides.)
 - B. Lecture: For those units co-located with Army and/or Air Force ROTC units, have staff officers from the other services brief on their respective services.
- V. Presentation
 - A. Department of Defense (DOD) organization
 1. The DOD is the successor agency to the National Military Establishment created by the National Security Act of 1947. It was established as an executive department of the government by the National Security Act Amendments of 1949, with the Secretary of Defense as its head.
 2. There are three primary provisions of the amendments:
 - a. The establishment of three military departments (Army, Navy and Air Force) under the Secretary of Defense (SECDEF).
 - b. The organization of each military department under its own Secretary.
 - c. The establishment of unified and specified commands.
 3. The intent of the National Security Act and amendments were to:
 - a. Increase civilian control of Armed Forces to be consistent with the constitutional requirements of

maintaining civilian control of the U.S. Armed Forces.

- b. Eliminate unnecessary duplication.
- c. Provide more efficient inter-service cooperation.
- d. Provide a unified strategic direction of the Armed Forces.

4. Missions of the DOD:

- a. Support and defend the Constitution of the United States against all enemies.
- b. Protect the United States, its possessions, and areas vital to its interests.
- c. Advance the policies and interests of the United States.
- d. Safeguard the internal security of the United States.

B. The Secretary of Defense (SECDEF)

- 1. The Office of Secretary of Defense was created by the National Security Act of 1947 as the successor to the Secretary of War.
- 2. The SECDEF is the principal defense policy advisor to the President and is responsible for the formulation of general defense policy and policy related to all matters of direct and primary concern to DOD.
- 3. The SECDEF is a member of the President's Cabinet and the National Security Council (NSC), which advises the President about the integration of domestic, foreign, and military policies relating to national security.

C. The Joint Chiefs of Staff (JCS)

- 1. The JCS was established informally in WWII and was modeled after the British Chiefs of Staff.
- 2. Under the National Security Act of 1947, the JCS was created as a permanent agency.
- 3. The Chairman of the JCS is appointed by the President from the Army, Navy or Air Force and is the principal military advisor to the President, NSC, and SECDEF. He/she is the senior military advisor in the country, but may not exercise military command over the JCS or any of the armed services.
- 4. The JCS consists of the Chairman, Vice-Chairman, the Chiefs of Staff of Army and Air Force, the Chief of Naval Operations, and the Commandant of the Marine Corps.

5. The members of the JCS, other than the Chairman, are military advisors who may provide additional information upon request of the President, the NSC, or SECDEF.

D. Unified and specified commands

1. Effective use of U.S. military power requires joint effort of all land, naval and air forces.
2. The National Security Act stated that each military department and service must coordinate to fulfill certain specific combat functions and for administering and supporting these forces.
3. Unified and specified commands provide the ability to combine forces effectively.
4. A unified command is composed of forces from two or more services, has a broad and continuing mission and is normally organized on a geographic basis.
 - a. Operation DESERT STORM/SHIELD in 1990/1991 and Operation IRAQI FREEDOM from 2003 to present were organized under the U.S. Central Command of an Army general.
 - b. The Unified Command Plan establishes the missions and geographic responsibilities among the combatant commanders. Two Unified Commands created after 01 October 2002 are U.S. Northern Command and Joint Forces Command. U.S. Northern Command is a combatant command assigned to defend the United States and support military assistance to civil authorities. In late 2001, Northern Command fell under the purveyance of the new Cabinet level Department of Homeland Security. The focus of the Joint Forces Command is transforming U.S. military forces; geographic responsibilities shifted to Northern and European commands.
5. A specified command also has a broad and continuing mission, but is organized on a functional basis and is normally made up of forces from a single service. The Forces Command is primarily an Army command.

E. Operational commands

1. Used for direction of actual combatant forces.
2. Consist of task groups, task forces, etc.
3. Normally change as one deploys.

F. Administrative commands

1. Provide support for the operational forces.

2. Normally located in CONUS, because they provide at-home support.
- G. Command and Control. (Discuss operational and administrative organization with emphasis on command and control.)
- H. U.S. Army missions and functions
1. The United States Army today is a "force projection Army." The primary mission is to prepare land forces for war, to fight our country's wars and win. Today's Army is unlike that of the Cold War era. The Army then was forward-based. Today's is essentially CONUS-based and relies on the services of the Navy and Air Force to transport and project the Army into the theater of operation.
 2. There are three phases or elements in an Army operation:
 - a. Mobilization (Active and Reserve units).
 - b. Deployment (utilizing other services as necessary).
 - c. Operational.
 3. Depending on the definition of war, military operations may or may not be involved in confrontation and conflict. This is known as Operations-Other-Than-War (OOTW). (Examples: disaster relief, fighting forest fires, drug interdiction, etc.)
 4. Functions
 - a. Organize, train, and equip forces for land-combat operations designed to defeat enemy land forces, seize and occupy land areas.
 - b. Provide air defense units to defend friendly territory from air attack.
 - c. Coordinate for joint amphibious operations with other services.
 - d. Conduct special operations.
 - e. Develop doctrines, procedures, and plans in conjunction with other services engaged in airborne operations.
 - f. Train and provide occupational forces and establishment of military government.
 - g. Provide humanitarian relief during national disasters.
 - h. Assist civilian communities during disturbances.

- i. Assist with civic action programs.
- I. U.S. Army organizational components (Major)
- 1. Basic branches and purposes
 - a. Infantry -- Leads infantry soldiers and employs combined-arms teams in combat.
 - b. Armor -- Leads armored forces and employs combined-arms teams in close combat.
 - c. Field artillery -- Provides fire support to ground forces.
 - d. Air defense artillery -- Employs air defense artillery weapons against enemy aircraft or missile attack.
 - e. Aviation -- Participates in the entire spectrum of Army missions (i.e., combat, combat support, and combat service support).
 - f. Special Forces -- Accomplishes missions of unconventional warfare, foreign internal defense, direct action, strategic reconnaissance, and counter terrorism.
 - g. Corps of Engineers -- Leads engineer soldiers in combat and combat support operations and carries out construction management and facilities engineering in the field.
 - h. Signal Corps -- Plans and manages communication systems from combat units to the nation's defense communications system.
 - i. Military Police Corps -- Supports combat operations, enforcement of laws and regulations, security of government property, criminal investigative operations, and the discharging of correctional functions.
 - j. Military Intelligence -- Plans, conducts, and supervises collection, analysis, production, and dissemination of finished intelligence products.
 - k. Civil Affairs -- Commands, controls, and coordinates civil military operations and civil administration.
 - l. Adjutant General Corps -- Manages the Army's administrative and personnel needs.
 - m. Finance Corps -- Responsible for management of the Army's financial resources.

- n. Chemical Corps -- Responsible for operations, training, scientific development, and acquisition in support of nuclear, biological, and chemical (NBC) defense programs.
 - o. Ordnance Corps -- Maintenance and life-cycle management of armament, conventional and special munitions, test equipment, management of air-defense and land-combat missile systems and construction material.
 - p. Quartermaster Corps -- Plans and directs all phases of the acquisition cycle along with preservation of all equipment and supplies.
2. Special branches
- a. Judge Advocate General Corps
 - b. Chaplain Corps
 - c. Medical Corps
 - d. Dental Corps
 - e. Veterinary Corps (only service to have DVMs)
 - f. Nurse Corps
 - g. Medical Specialist Corps -- Dietitians, physical therapists, occupational therapists.
 - h. Medical Service Corps -- Administrative, technical, and scientific support for medical department.
3. Department of the Army organization
- a. Secretary of the Army -- Appointed civilian; responsible for all affairs affecting the Department of the Army.
 - b. Staffs
 - (1) Office of the Chief of Staff -- Principle military advisor to the Secretary of the Army and is charged by him with the planning, development, and execution of the Army program.
 - (2) General Staff -- Responsible for operations and plans, personnel, and logistics.
 - (3) Special Staff -- Provide individuals to the specialty branches, including Corps of Engineers, Chaplains, Medical and Dental Corps, Judge Advocate General Corps, military intelligence, etc.

(a) Army Reserve -- Provides combat service support.

(b) National Guard -- Provides combat supplement.

4. Organization of tactical Army units

a. Squads -- Smallest components; range from 4 to 10 individuals.

b. Platoons -- 2 or more squads; led by Lieutenants.

c. Companies -- 2 or more platoons, usually of the same type; limited capacity for self-support; led by Captains.

d. Battalions -- 2 or more company-sized units and a headquarters; generally organized by branch with the addition of administrative and logistical support; led by Lieutenant Colonels.

e. Brigades -- 2 or more battalions; can be part of a higher divisional structure of separate units; led by Colonels or Brigadier Generals.

f. Divisions -- 8 to 11 maneuver battalions, 3 to 4 field artillery battalions and an entire range of combat support and combat service support equipment and personnel; infantry, armored, mechanized infantry, airborne, air assault, and light infantry units will be present.

g. Corps -- Largest tactical unit; plans and conducts major operations and battles.

J. U.S. Air Force missions and functions

1. Missions:

a. Strategic aerospace offense

b. Strategic aerospace defense

c. Counter air

d. Air interdiction (AI)

e. Close-air support (CAS)

f. Special operations

g. Airlift

h. Aerospace surveillance and reconnaissance

i. Aerospace maritime operations

2. Strategic aerospace offense
 - a. The objective is to neutralize or destroy an enemy's war-sustaining capabilities or will to fight.
 - b. Attacks directed against an enemy's key military, political, and economic power base.
3. Strategic aerospace defense
 - a. The objectives are to integrate aerospace warning, control, and intercept forces to detect, identify, and destroy enemy forces attacking our nation's war-sustaining capabilities or will to fight.
 - b. Strategic aerospace defense forces provide warning and assessment of strategic attack to the National Command Authority through extensive network or warning sensors, both on the earth's surface and throughout aerospace.
4. Counter air
 - a. The objectives are to gain control of the aerospace environment.
 - b. Offensive counter air (OCA) -- Aerospace operations conducted to seek out and neutralize or destroy enemy aerospace forces at a time and place of our choosing.
 - c. Suppression of enemy air defense (SEAD) -- Aerospace operations which neutralize, destroy, or temporarily degrade enemy air defensive systems in a specific area by physical and/or electronic attack.
 - d. Defensive counter air (DCA) -- Aerospace operations conducted to detect, identify, intercept, and destroy enemy aerospace forces that are attempting to attack friendly forces or penetrate friendly airspace.
5. Air interdiction (AI). The objectives are to delay, disrupt, divert, or destroy an enemy's military potential before it can be brought to bear effectively against friendly forces.
6. Close-air support (CAS)
 - a. The objectives are to support ground operations by attacking hostile targets in close proximity to friendly ground forces.
 - b. Requires detailed coordination and integration with the fire and maneuver plans of friendly surface forces.
7. Special operations

- a. The objectives are to influence the accomplishment of strategic or tactical objectives, normally through the conduct of low visibility, covert or clandestine military operations.
 - b. Usually conducted in enemy-controlled or politically sensitive areas.
- 8. Airlift
 - a. The objectives are to deploy, employ, and sustain military forces through transportation of men, equipment, and supplies in the air.
 - b. Combat missions
 - (1) Air drop
 - (2) Extraction
 - (3) Air landing of ground forces and supplies into combat
 - c. Combat support missions. Logistics support transportation of personnel and equipment.
 - d. Two perspectives of airlift
 - (1) Strategic: Inter-theater
 - (2) Tactical: Intra-theater
- 9. Aerospace surveillance and reconnaissance
 - a. The objectives are to collect information from airborne, orbital, and surface-based sensors.
 - b. Surveillance operations collect information continuously from aerospace, surface and subsurface sources.
 - c. Reconnaissance operations are directed toward localized or specific targets.
- 10. Aerospace maritime operations. The objectives are to neutralize or destroy enemy naval forces and to protect friendly naval forces and shipping.
- K. U.S. Air Force organizational components (Refer to Intro CD-ROM for handouts and PowerPoint slides.)
- L. U.S. Coast Guard missions and functions
 - 1. New role under the Department of Homeland Security. One facet of the sweeping changes President George W. Bush made post September 11, 2001, was to realign the operational

control of the U.S. Coast Guard under the newly created cabinet-level Department of Homeland Security. Prior to this change, the USCG fell under the Department of Transportation during peacetime and the Department of Defense during wartime.

2. Missions

- a. Enforcement of all maritime laws and treaties.
- b. Search and rescue operations (SAR).
- c. Enforcement of national anti-drug policy.
- d. Installation, maintenance, upkeep, servicing, and operation of all aids to navigation, including navigation lights, channel markers, and navigational sound-signaling devices.
- e. Ice-breaking operations to maintain clear passage in domestic waters for all commercial and military traffic.
- f. Support of scientific research projects in the Arctic and Antarctic.
- g. Readiness to fulfill any military function as directed.
- h. Environmental cleanup and control.
- i. Boating safety in domestic and inland lakes and waterways.
- j. In wartime, provision of military reconnaissance.
- k. Safeguarding of ports and harbors against destruction from sabotage.
- l. Investigation of any marine disaster in domestic waters.
- m. Instruction to the general public concerning all aspects of water and small boat safety.

M. U.S. Merchant Marine

- 1. Importance/Mission: The role of the Merchant Marine in defense is to augment overseas lifting capabilities of the Air Force, Navy and Marine Corps for personnel, equipment and stores. At the same time, it continues its normal role of transporting the material needed to support the national economies of the U.S. and its allies.
- 2. Organization

- a. The Maritime Administration (MARAD), a unit of the Department of Transportation since 1981, is a civilian organization that regulates the U.S. shipping industry and maintains shipping reserves for the government in peacetime.
- b. In time of war or national emergency, MARAD is modified to staff the National Shipping Authority, providing positive control over the nation's shipping assets in order to ensure maximum efficiency in support of vital military and economic priorities. This is known as civil direction of shipping (CDS).
- c. In wartime, ships needed by DOD for sealift are obtained from government-maintained shipping reserves or contracted from private companies to the Military Sealift Command (MSC). Other shipping assets remain under private operation subject to government direction.
- d. All U.S.-controlled merchant ships not under direct jurisdiction of the DOD are still subject to naval control of shipping (NSC), which allows the Navy to provide the most effective possible protection for merchant ships.
- e. MARAD administers the officer training program at the U.S. Merchant Marine Academy and provides financial support to state maritime academies.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 2

HOURS: 2.0

TITLE: Mission and Organization of the United States Navy, the United States Naval Reserve and the United States Marine Corps

I. Learning Objectives

- A. The student will know the operational and administrative chains of command within the Department of the Navy.
- B. The student will comprehend the missions of the United States Navy and the United States Marine Corps.
- C. The student will know the concept of amphibious warfare.
- D. The student will know relevant Marine Corps unrestricted and restricted line career paths and opportunities, including the requirements for joint duty.
- E. The student will know the organization and importance of the Naval Reserve as a component of mobilization readiness.
- F. The student will comprehend the role the Naval Reserve plays in the total force concept whereby it provides the active fleet endurance capabilities for the demands of a full-time war footing.
- G. The student will know the role of the active forces in the training of the Naval Reserve.
- H. The student will comprehend the importance of channeling personnel serving with or under their leadership into the Naval Reserve should they decide to leave active service.

II. References and Texts

- A. Instructor references
 - 1. Forward...From the Sea
 - 2. The Naval Officer's Guide, Chapters 13, 14, 15
 - 3. The Marine Officer's Guide
 - 4. Naval Reserve Indoctrination Guide
 - 5. The Bluejacket's Manual
 - 6. Naval Orientation
 - 7. Naval Doctrine Publication 1, Naval Warfare
 - 8. Naval Doctrine Publication 2, Naval Intelligence

9. Naval Doctrine Publication 4, Naval Logistics
10. Naval Doctrine Publication 6, Naval Command and Control
- B. Student texts
 1. The Naval Officer's Guide, Chapters 13, 14, 15
 2. The Bluejacket's Manual, Appendix A
- C. Student resource: The Marine Officer's Guide
- D. Student handouts
 1. "The United States Marine Corps Summary" (attached)
 2. "Famous Quotes, The United States Marine Corps" (attached)

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Course Coordinator CD-ROM
- C. Computer/projection system
- D. VCR/Monitor
- E. Videos:
 1. "A Few Good Men," 25 min
 2. "Desert Storm - Navy/Marine Corps Team," 19 min

IV. Suggested Methods and Procedures

- A. Seek assistance from Naval Reserve Readiness Commands.
- B. Augment this lecture by using personnel from a local reserve unit.

V. Presentation

- A. Department of the Navy
 1. Mission
 - a. The strategic concept Forward...From the Sea embarks the Navy and Marine Corps team on a fundamental shift in operational focus and a landmark reordering of warfighting priorities. Forward...From the Sea underscores that naval forces must be sufficient for forward-presence operations in peacetime, credible enough to act as a significant deterrent, and be able to fight from the sea in a time of war. This strategic concept capitalizes on the unique contributions of the Navy/Marine Corps forces across

the full spectrum of operations in peace and war necessary to assure the nation's security.

b. Objectives

- (1) Organize, train, equip, prepare, and maintain readiness of the U.S. Navy and Marine Corps
- (2) Support Navy and Marine forces when assigned to unified commands

c. Composition. The Department of the Navy consists of three distinct parts of both service members and civilians.

(1) Navy Department

- (a) Secretary of the Navy (SECNAV)
 - (b) Chief of Naval Operations (CNO)
 - (c) Commandant of the Marine Corps (CMC)
 - (d) Commandant of the Coast Guard (in times of war and national emergency)
- (2) Operating forces. Ships, aircraft, submarines, Marines, and direct-support bases involved in operations.
 - (3) Shore establishments not directly involved in supporting the fleet (Recruiting Command, NROTC).

d. Functions of the Office of the Secretary of the Navy (SECNAV)

- (1) Civilian head of Navy appointed by the President
- (2) Under Secretary is SECNAV's chief assistant
- (3) Other Assistant Secretaries and Deputy Under Secretaries work in areas such as legislative affairs, program appraisal, research and development, manpower, etc.

e. Functions of the Chief of Naval Operations (CNO)

- (1) Senior military officer in the Navy (unless Chairman of JCS is naval officer)
- (2) Member of JCS
- (3) Principle advisor to SECNAV and President

- (4) In command of all administrative and training commands
- f. Role of a commissioned officer as a member of the U.S. Armed Forces
 - (1) Each person entering the Navy takes a basic oath to uphold and defend the Constitution against all enemies, to bear true faith and allegiance, and to faithfully discharge the duties of his/her office.
 - (2) The President has "special trust and confidence" in the complete dedication, professional knowledge, competence and abilities of officers and has granted extensive authority. When commissioned, new officers reaffirm the basic oath, but their commission places an even greater responsibility on them. Their commission is a contract with the nation to do all in their power to render themselves fully capable of leading men and women into war in the interest of their country. By accepting a commission, officers are accepting that obligation to uphold their bond with that basic oath.
- 2. Command and control. (Discuss operational and administrative organization with emphasis on command and control.)
- 3. The U.S. Navy's five fundamental and enduring roles in support of the National Security Strategy are as follows: Projection of power from sea to land, sea control and maritime supremacy, strategic deterrence, strategic sealift, and forward naval presence.
 - a. Projection of power from sea to land. Taking the fight to the enemy; sending national and naval power ashore.
 - (1) Objectives
 - (a) Deliver and support troops ashore
 - (b) Secure land from the enemy
 - (c) Destroy offensive capability of opponent
 - (d) Harassment/Intimidation
 - (2) Tactics
 - (a) Amphibious assault (Marines -- WWII, Korea, Grenada)

- (b) Naval bombardment (USS *Wisconsin* in Operation Desert Storm)
 - (c) Tactical air protection (used extensively in Vietnam, Libya, Arabian Gulf)
 - (d) SSBN deterrent patrol
- (3) Forces used in power projection
 - (a) Marines
 - (b) Carrier air wings
 - (c) Naval bombardment (BB are gone)
 - (d) Cruise missiles (Tomahawk)
- b. Sea control and maritime supremacy (first and only until early 1800's)
 - (1) Objectives
 - (a) Maintain use of the sea, while denying its use to the enemy. This includes air and undersea control of the sea lines of communication (SLOCs).
 - (b) Ensure industrial supply lines remain open.
 - (c) Reinforce/resupply military forces overseas.
 - (d) Provide wartime economic/military supplies to allies.
 - (e) Provide safety for naval forces that are protecting power ashore.
 - (2) Tactics
 - (a) Sortie control: "Bottle up" the enemy in port through blockade such as that used in Persian Gulf/Cuban Missile Crisis.
 - (b) Choke point control: Using geographic choke points to prevent enemy forces from getting to open ocean (Suez Canal).
 - (c) Open-area operations: Seeking out and neutralizing the enemy on the open ocean.
 - (d) Local engagement: Concentration of forces.
 - (3) Forces used in sea control

- (a) Carrier air wings
 - (b) Surface combatants
 - (c) Attack submarines
 - (d) Mines
- c. Strategic deterrence (since WWII)
 - (1) Objectives
 - (a) To deter all-out attack on U.S. or allies.
 - (b) To pose the threat of unacceptable losses to a potential aggressor contemplating less than an all-out attack.
 - (c) To maintain a stable international political environment.
 - (2) Background. The Navy is responsible for one third of the nuclear triad.
 - (a) U.S. Strategic Command, with B-52s/B-1s/B-2s
 - (b) Land-based missiles, such as MX, Minuteman, and Midgetman
 - (c) Seagoing nuclear-powered, fleet-ballistic missile submarines (FBMs), such as the *Ohio*-class
 - (3) Discuss recent bilateral reduction of strategic weapons by U.S./former Soviet Union.
 - (4) Tactics
 - (a) Assured second strike
 - 1. Trident missile -> 4,000 mi range, 24 per sub
 - 2. Submarine is survivable and credible deterrent
 - (b) Controlled response. Attack plans can be changed in case of partial attack. (Tomahawk, CVN strike capability)
 - (c) Deter third-world powers. May stop national attack, but not terrorist attack.

(d) Maintain balance of power.

d. Strategic sealift

(1) Objective: To deliver U.S. (and allied) forces and sustaining supplies to any part of the world, whenever needed.

(2) Tactics

(a) Prepositioning: This capability allows the United States to place sustainment supplies (e.g., large quantities of petroleum products, ammunition, etc.) near crisis areas for delivery to contingency forces. (The Maritime Prepositioning Force is not considered a part of sealift; it is considered a power-projection asset.)

(b) Surge: The initial deployment of U.S.-based equipment and supplies in support of a contingency, transported in rapid-reinforcement shipping.

(c) Sustainment: Shipping that transports resupply cargos to stay abreast of force consumption rates and to build up theater reserve stock levels.

e. Forward naval presence (intimidate)

(1) Objectives

(a) To deter actions not in the interests of the United States or its allies.

(b) To encourage actions that are in the interests of the United States or its allies.

(2) Tactics

(a) Preventative deployments. Provides forward presence; routine operations (Med, Westpac deployments).

(b) Reactive deployments. Forces deployed in response to crisis (Iran/Beruit/ Kuwait).

(3) Forces used. Those forces that are best seen and present the greatest influence (CV/air-craft/cruisers/ARGs/CVBGs).

B. The Naval Reserve

1. Mission of the Naval Reserve

- a. Primary: To provide trained units and qualified individuals for active duty in time of war or national emergency and at other times required by national security.
 - b. Secondary: To assist active force in accomplishing its peacetime mission as a by-product of training for mobilization.
2. Total Force Concept
- a. Includes all the resources available to perform national defense missions. The reserves are an integral and vital portion of the total resources.
 - b. Budgetary constraints do not make it feasible to provide for an active force that is capable of handling all contingencies.
 - c. It is extremely important that reserve training is meaningful and mobilization-enhancing.
3. History of the Reserves
- a. The Revolutionary War was fought by citizen soldiers.
 - b. In March 1915, Congress established a federal Naval Reserve.
 - c. By the end of WWII, there were 330,000 reservists in the Navy.
 - d. In Korea, approximately 25 percent of the Navy's personnel were reservists.
 - e. In Vietnam, six air-reserve squadrons and two reserve Seabee battalions were recalled.
 - f. In the Gulf War, numerous reserve units were recalled.
 - g. During Operation Enduring Freedom and Iraqi Freedom, over 50,000 reservists were called up to operate hand-in-hand with active duty personnel.
4. Present status
- a. There are about 198,000 reservists, both officer and enlisted.
 - b. About 82,500 are paid Selective Reservists and 116,100 are Individual Ready Reservists.
 - c. In a number of mission areas, the Naval Reserve maintains a high percentage of the total Navy

capability. This readiness has been increasing in recent years.

5. Reserve manpower categories

a. Ready Reserve

- (1) Consists of three branches
- (2) Selected Reserve. This is the core of the Naval Reserve program and consists of the "active" inactive sailors and officers. They are subject to involuntary recall for war or national emergency, or by the President for up to 90 days to support operational requirements. There are currently about 82,500 selected reservists. Each year, selected reservists perform 48 drills and receive 2 weeks of training in a pay status.
- (3) Training and Administration of Reserves (TARs): Approximately 16,000 TARs serve on full-time active duty in support of the Naval Reserve. They serve on Naval Reserve ships and air squadrons.
- (4) Individual Ready Reserve: The IRR has about 116,100 people, also subject to involuntary recall. Members are not required to train.

b. The structure of the Reserves is based on the structure of the Selected Reserve.

- (1) Commissioned units: Composed of ships, squadrons, and construction battalions; these are complete units delivered to an operating force.
- (2) Reinforcing units: These augment Regular Navy commissioned units and operating staffs with trained personnel, so combat forces can operate at the highest level of readiness.
- (3) Sustaining units: These reinforce fleet and force support activities with trained personnel to provide surge capability.

6. Naval Reserve Administration

a. Organization

- (1) Chief of Naval Reserve: Active duty Rear Admiral that reports to the CNO; equivalent to a fleet commander.
- (2) Commander Naval Reserve Force: Headquartered in New Orleans; is responsible for the

administration and management of Naval Reserve programs.

b. Elements of the Naval Reserve

(1) Surface reserve

(a) 185 reserve centers

(b) Less than 2,000 units

(c) 4% of all commissioned ships

(2) Air reserve

(a) 5 Naval Air Reserve wings

(b) 33 squadrons with about 6% of the Navy's aircraft inventory

(3) Other programs

(a) Intelligence

(b) Shipbuilding

(c) Supply

(d) Medical

(e) Legal

7. Reserve training

a. Regularly scheduled drill

b. Rate training

c. Officer professional development

d. Shipboard simulator. Provides hands-on training and communications drills

e. Reserve unit evolutions. Active duty for training

(1) Required for Selected Reserves

(2) Critical to maintain skills. Active duty members need to ensure that reservists remain fully qualified.

8. U.S. Navy support. Subordinates leaving active service should be strongly encouraged to affiliate with the Naval Reserve. The individual can continue their Navy career and receive retirement benefits.

- C. The United States Marine Corps (USMC). (Recommend having the Marine Officer Instructor (MOI) present this lecture.)

1. Roles and missions of the Marine Corps

- a. Amphibious assault: The Marines are the U.S. military's specialists in amphibious assault. As such, the Marine Corps has a unique role in studying, training in, and executing the mission of amphibious warfare.
- b. Land combat incident to naval campaigns: Marines must be prepared to engage in sustained land combat beyond the initial assault. After Marines have secured a beachhead or port facility, they must be able to defend it against counterattack (and press on toward objectives which lie inland).
- c. Additional duties: In two important early laws defining the mission of the Marine Corps (the Act of 11 July 1798, "Establishing and Organizing a Marine Corps," and the Act of 30 June 1834, "For the Better Organization of the Marine Corps"), an important phrase was included. They stated that "...the Marine Corps shall perform such other duties as the President may direct." These duties have included:
 - (1) State Department guard duty (embassies);
 - (2) White House duties;
 - (3) Providing security forces for naval shore stations;
 - (4) Providing ships' detachments;
 - (5) Engaging in sustained inland ground operations; and
 - (6) Acting as a national "force in readiness."

2. Status of the Marine Corps

- a. The Marine Corps is a separate military service possessing distinct statutory roles and missions.
- b. The Marine Corps is a part of the Naval Establishment (or Department of the Navy) and comes directly under the Secretary of the Navy.
- c. The Commandant of the Marine Corps (CMC) commands the Corps as a whole and is directly responsible to the Secretary of the Navy for the total performance, administration, readiness, discipline, and efficiency of the Corps. (The CMC does not report to the CNO.) The CMC also sits as one of the members of the Joint Chiefs of Staff.

3. Marine Corps organization (summary)

a. Composition of the Marine Corps

- (1) Land combat forces
- (2) Aviation forces
- (3) Service forces
- (4) Reserves
- (5) Security forces
- (6) Supporting establishment

b. Principal subdivisions of the Marine Corps

- (1) Headquarters, U.S. Marine Corps (HQMC). HQMC is located in the Navy Annex of the Navy Department; however, the Commandant's office moved to the Pentagon in December 1995. Headquarters is literally the headquarters of the Commandant and could, in theory, take to the field, as it actually did on occasion in the 19th century.
 - (a) Commandant of the Marine Corps (CMC). The Commandant is directly responsible as a command assistant to the Secretary of the Navy for the readiness, total performance, and administration of the Marine Corps as a whole. The principal duties of the CMC include procurement, discharge, education, training, and distribution of the officers and enlisted men of the Corps, and all matters of command, readiness, organization, administration, equipment, and supply of the Marine Corps.
 - (b) Assistant Commandant. The Assistant Commandant acts as the principal advisor to the CMC and as the CMC's Chief of Staff.
 - (c) Various other officers and offices
- (2) Marine Corps operating forces
 - (a) Fleet Marine Force: The Fleet Marine Force, or FMF, consists of those operating forces assigned to the Navy operating forces or to unified commands. The FMF consists of three divisions and three air wings.

- (b) Operating forces assigned to shore activities of the Naval Establishment. These forces primarily serve as security detachments, but also can provide trained personnel from which to form expeditionary forces.
 - (c) Operating forces assigned to the State Department
 - (d) Operating forces not otherwise assigned
 - (3) Marine Corps Supporting Establishment. The Marine Corps Supporting Establishment provides, trains, maintains, and supports the operating forces. The Supporting Establishment includes Marine Corps schools; the recruit depots; supply installations; reserve activities; certain Marine Corps bases, barracks, and air stations; and various other activities.
4. Typical career pattern for Marine officers
- a. Initial training: The Basic School. All newly commissioned 2nd Lieutenants attend this school, which consists of six months of field and classroom training in Quantico, VA.
 - b. Follow-on training
 - c. Initial operational tour in the FMF
 - d. Continued rotation between FMF tours, non-FMF tours, and staff/joint staff tours
 - e. Promotion
 - f. Training
5. Amphibious warfare
- a. Definition. An amphibious assault is defined as an attack launched from the sea against a hostile shore by naval and landing forces.
 - b. Purpose. Amphibious operations are conducted to establish a landing force on a hostile shore to do all of the following actions: To prosecute further combat operations; to obtain a site for an advanced naval or air base; and to deny the use of an area or facility to the enemy.
 - c. Types
 - (1) Demonstration

- (2) Amphibious raid
- (3) Amphibious assault
- (4) Amphibious withdrawal

d. Phases of amphibious assaults (PERMAT)

- (1) Planning
- (2) Embarkation
- (3) Rehearsal
- (4) Movement
- (5) Assault
- (6) Termination

- e. Command relationships. The two key officers in the amphibious operation are the CATF (Commander Amphibious Task Force) and the CLF (Commander Landing Force). The CATF is a Navy officer, while the CLF is a Marine Corps officer. The two are equal during the planning phase. CATF then takes command of all operations; control of land operations is shifted to the CLF when both commanders agree that the landing force is firmly established ashore and ready to assume full responsibility for subsequent operations.

D. Show segments from one or both videos. Discuss related points.

UNITED STATES MARINE CORPS SUMMARY

1. The United States Marine Corps is one of the four branches of the Armed Forces whose primary mission is the defense of our country. Marines are a proud lot, and Marine Corps tradition not only tells much about why the Marine Corps is the way it is, but it also plays an important part in keeping the Marine Corps on the leading edge worldwide in our specialized area of amphibious operations.
2. Marines are recognized for their tenacity, loyalty, ingenuity, and courage, but most importantly for their discipline. The same Marines who in one day breached the Iraqi minefields, decimated the Revolutionary Guard, and forcibly liberated Kuwait City only hours later treated civilians and enemy prisoners of war with professional care and compassion.
3. So what is the origin of the Marine Corps?
 - a. The Marine Corps birthday is celebrated each year on 10 November to commemorate the authorization of the Continental Congress to form two battalions of Marines in 1775. The first Marine recruits were raised through the efforts of Captain Samuel Nicholas from among the patrons of Tun Tavern in Philadelphia, PA. Marines fought with distinction at the mid-Atlantic battles of Trenton, Morristown, Assanpunk, and Fort Mifflin between 1776 and 1777. The Marine Corps was formally established into law on 11 July 1798.
 - b. The National Security Acts of 1947 and 1952 more formally spelled out the roles, missions, and organization of the Department of Defense and the United States Marine Corps. They established a Secretary of Defense who oversees three military departments and four military services. The Marine Corps was reaffirmed as a maritime force dedicated to ensuring the ability of the United States to project its power around the world.
4. Within the Department of Defense, each of the three military departments is represented on the Joint Chiefs of Staff (JCS) by the Chief of Staff of each service. As such, the Commandant of the Marine Corps (CMC) shares coequal status with the Chief of Naval Operations (CNO), and the Chiefs of Staff of the Army and Air Force when discussing matters pertaining to the Marine Corps. The JCS act as the principal military advisor to the President, National Security Council, and Secretary of Defense.
5. Within the Department of the Navy (DON), the CNO and the CMC represent their respective services to the Secretary of the Navy in matters not of interest to the Army and Air Force. These responsibilities are largely administrative and political. Issues such as end strength, DON strategy, and budget are items of highest interest at this level.
6. Operationally, Marine units fall under the cognizant fleet commander. Regional unified commands control of maritime resources with capabilities to engage military targets with unsurpassed combined arms capabilities. The Marine Corps is but one (albeit, the most important) weapon of the Commander, Unified Command.

7. The Marine Corps is maintained due to the need to be able to project power around the world. Since oceans encompass two-thirds of the earth's surface, access to most of the world's countries can be gained from the ocean. However, few conflicts can be effectively resolved from a distance, such as by a naval force out to sea. In order to be effective, a military organization must be able to put a significant fighting force on the ground to seize advanced naval bases and to allow further military operations ashore. This is the mission of the Marine Corps.
8. An amphibious assault is defined as a projection of force, from the sea, against a defended beach. Since this type of operation is significantly distinctive from traditional ground warfare, the Marine Corps is also tasked with continually evaluating and developing doctrine to support this mission.
9. Aside from the primary mission of seizing and defending advanced naval bases, the Marine Corps also assumes the mission of effecting amphibious operations that will allow prosecution of further operations ashore, such as establishing a beachhead that can be used as a base of operations to conduct further ground combat inland. Denial of use of terrain or facilities to the enemy is also a function of amphibious operations that Marines fulfill as part of their mission.
10. As with any major military operation, the preparation to conduct an amphibious assault is a major evolution. Formally, the cycle goes from planning, which can begin years in advance, to the termination of assault. The acronym PERMAT is sometimes used to make these steps easier to remember.
11. It is the theatre commander who directs that an amphibious operation will be conducted; the Commander Amphibious Task Force (CATF) actually conducts the operation. During planning stages, the Commander Landing Force (CLF) shares coequal status with the CATF. During the execution of the operation, the (CLF) is subordinate to the CATF. This relationship requires the close cooperation of a dedicated Navy-Marine Corps team.
12. Alongside the primary missions of the Marine Corps, several more traditional missions remain. Marines are deployed around the world guarding embassies and naval stations overseas. Additionally, combat ready Marine units are forward deployed on Navy ships in potential trouble spots around the world. This comprises the country's most effective rapid response force for power projection, protecting vital interests and citizens, and for disaster relief efforts.
13. It's an old cliché, but it is true. From its very origin, it has been a lean Corps, operating on a fraction of the budget of the other services. The Marine Corps depends on thinking leaders at the small unit level to identify better ways to get the job done, and active research and development arms to find the technology to allow Marines to fight smarter.
14. The organization of the Marine Corps reflects this concept. Bureaucracy is minimized and with the bulk of the Corps in the operational units. Supporting establishments are staffed with

civilians where practical, commanded by Marines, and the best of the best are selected to train new recruits and officers.

15. Recruits are trained at two recruit training depots: Parris Island on the east coast, and San Diego on the west coast. All officers train at Officer Candidates School and The Basic School at Quantico, Virginia. Quantico is also where the research and development efforts of the Marine Corps are focused. Ideas are nurtured and concepts validated in units such as the Warfighting Center, Wargaming and Assessment Center, and Helicopter Marine Experimental Squadron One.
16. For administrative purposes, the Fleet Marine Forces are organized as Marine Expeditionary Forces with one based at Camp Lejeune, NC; Camp Pendleton, CA; and Okinawa, Japan. When smaller units are required for an operation, Marines deploy by a concept called task organization. Units are built as composite units, with essential parts taken from parent organizations and bonded together to form a MEB or MEU.
17. A critical part of the Marine Corps is the reserves. The Marine Forces, Reserves, headquartered in New Orleans, provides the Marine Corps flexibility in answering calls for operations of all sizes. These reserves are spread across the United States, but can respond rapidly to calls for mobilization with forces prepared and capable of accomplishing the amphibious missions.
18. It has been said that the heart and soul of the Marine Corps is its staff noncommissioned officers. Then, certainly, it is the Officer Corps that is the brains of the Corps. The quality of young Marines is higher than it has ever been in terms of intellect and education. It will take a thinking, acting officer to gain the trust and confidence of this breed of Marine necessary to lead them in combat. The leadership skills of initiative, decisiveness, boldness, etc., are nowhere put to better use than as a leader of Marines.
19. All Marine officers attend The Basic School. There they are trained to be leaders of Marines. Thereafter, all unrestricted officers can be called on to lead in any of these occupational specialties. However, on completion of The Basic School, each officer will attend a follow-on school to give them specialized training in the area that will become their primary responsibility. The leadership challenge of leading Marines in combat in a combat arms specialty makes these billets very competitive.
20. Many other opportunities await Marine second lieutenants. Marine engineers have a broad range of responsibility that span the breaching of minefields to building bridges and to setting power, water, and drainage in a remote base camp. Marine communicators work with state of the art technology including satellite communications and secure transmissions.
21. More technical specialties are also required to support Marines in and out of combat. Many feel no job is more important than that of the disbursing officer, keeping Marines paid and happy.
22. Another vital arm of the Marine Corps is aviation. Since Marine units often must be self-supporting and independently deployable, all aviation jobs can be filled by Marines, led by Marine officers.

23. Marine pilots command and fly aircraft ranging from helicopters to fixed-wing jets to heavy hauler cargo planes in support of MAGTFs. Though the Navy bears the brunt of the air superiority mission, the Marine Corps has substantial air-to-air capable aircraft, the F/A-18 *Hornet*. These fast jets are current technology and are also capable of flying air-to-ground missions when needed. The workhorse of the fixed-wing aircraft is the AV-8B *Harrier*. Able to take off vertically and from short runways, the *Harrier* is able to remain on target, and available to calls longer making it accessible to the battlefield area. The CH-46 is the Marine Corps primary troop lift vehicle. This bird has served the Corps well for over 20 years and is nearing the end of its productive life. The projected replacement for the CH-46 is the tilt-rotor V-22 *Osprey*.
24. Not just anyone can be a Marine pilot. Marine pilots are leaders of Marines first. They go through The Basic School like all other officers and, as unrestricted officers, can be assigned other jobs as conditions necessitate. Physical requirements for pilots are similar to other officers with the exceptions of sight requirement and additional swimming capabilities. Many officers become pilots as the result of a "guarantee" they received before commissioning. This "guarantee" ensures them a spot in flight school if they successfully receive a commission, complete The Basic School, and maintain their physical health. Aircraft assignment, like ground officer occupational specialty, is competitively based primarily on the needs of the Marine Corps.
25. The Marine Corps places a premium on education. All Marine officers are expected to continue professional education through a progression of military schools throughout their careers. The Commandant of the Marine Corps publishes a reading list and encourages officers to read all books on the list and more. Additionally, education programs are offered to allow officers to attain masters degrees while serving on active duty and to pursue law degrees and serve in the legal services specialties in the Marine Corps.
26. Marines are truly a gallant breed. But the essential element for its success is the Navy-Marine Corps team. At some time in your career, you will work with or for Marines or command Marines. Hopefully, the information you have received from this class (or these classes) will help to make the working relationship a more effective one.

**FAMOUS QUOTES
UNITED STATES MARINE CORPS**

"I have just returned from visiting the Marines at the front, and there is not a finer fighting organization in the world."	General of the Army Douglas MacArthur, U.S. Army
"The deadliest weapon in the world is a Marine and his rifle."	General Pershing, U.S. Army
"The Marine Corps has been called by the New York Times, the elite of this country. I think it is the elite of the world."	Admiral William Halsey U.S. Navy
"A ship without Marines is like a coat without buttons."	Admiral David Farrugut U.S. Navy
"The more Marines I have around the better I like it."	General Mark Clark, U.S. Army
"Uncommon valor was a common virtue."	Admiral Nimitz, U.S. Navy
"The American Marines have it (pride), and benefit from it. They are tough, cocky, sure of themselves and their buddies. They can fight and they know it."	General Mark Clark, U.S. Army
"No one can ever say that the Marines have failed to do their work in hand-some fashion."	Major General Hagood U.S. Army
"Today, the world looks to America for leadership. And America looks to its Corps of Marines."	President Ronald Reagan Commander U.S. Armed Forces
"I can never again see a United States Marine without experiencing a feeling of reverence."	General Johnson, U.S. Army
"The Marines are careful, brave fighters...they were like hunters, boring in relentlessly, without fear. I never heard a wounded Marine moan."	General U.S. Army General Staff
"I am convinced there is no smarter, handier, or more adaptable body of troops in the world."	Prime Minister Britain Winston Churchill
"Why the hell can't the Army do it if the Marines can; they are all the same kind of men... why can't the Army be like the Marines?"	Commander in Chief, AEF Gen. John Pershing, U.S. Army

"The safest place in Korea was right behind a platoon of Marines. Lord, how they could fight.

Major General Frank Lowe
U.S. Army

"Panic sweeps my men when they are facing the American Marines."

Captured North Korean Major

"There is no military body in our country of higher efficiency than the Marine Corps. They take great pride in their profession. They never let things slack a bit."

Rear Admiral C.M. Winslow
U.S. Navy

"I should deem a man-of-war incomplete without a body of Marines...imbued with that esprit that has so long characterized the "Old Corps."

Commodore Joshua R. Sands
U.S. Navy

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 3

HOURS: 2.0

TITLE: Mission, Academic Requirements, and Regulations of the Naval Reserve Officers Training Corps (NROTC) Program

I. Learning Objectives

- A. The student will know the mission and intent of the NROTC Program.
- B. The student will be familiar with each of the NROTC scholarship programs.
- C. The student will comprehend the academic course requirements for each NROTC program.
- D. The student will be familiar with performance review board procedures.
- E. The student will comprehend the circumstances under which an NROTC student might be required to appear before a performance review board.
- F. The student will know the physical fitness and swimming requirements for the NROTC program.
- G. The student will know the standards of conduct and aptitude requirements of the NROTC Program.
- H. The student will comprehend the obligations incurred by subscribing to the NROTC Honor Code.
- I. The student will know the organization of the NROTC academic program.
- J. The student will know the local battalion organization and chain of command.

II. References and Texts

- A. Instructor references
 - 1. CNET P1533/3 (Series), "NROTC Administrative Manual (NAM)"
 - 2. CNETINST 1533.12 (Series), "Regulations for the Administration and Management of the Naval Reserve Officers Training Corps (NROTC)"
 - 3. OPNAVINST 6110.1 (Series), "Command Physical Readiness Test Summary"
- B. Student texts: None

III. Instructional Aids

- A. Course Coordinator CD-ROM
- B. Computer/projection system
- C. Whiteboard/chalkboard

IV. Suggested Methods and Procedures

- A. Method options
 - 1. Prepare handouts summarizing the material (from the Course Coordinator CD-ROM).
 - 2. Instructors should keep in mind that if students are to excel in the program, they must know the requirements and limits of the programs.
- B. Procedural and student activity options: Lecture

V. Presentation

- A. Describe the NROTC program.
 - 1. Mission: To develop midshipmen mentally, morally, and physically and to imbue them with the highest ideals of duty and loyalty, and with the core values of honor, courage, and commitment in order to commission college graduates as naval officers who possess a basic professional background, are motivated toward careers in the naval service, and have a potential for future development in mind and character so as to assume the highest responsibilities of command, citizenship, and government.
 - 2. Goals. The primary objectives of the NROTC Program are to provide NROTC students with:
 - a. An understanding of the fundamental concepts and principles of Naval Science.
 - b. A basic understanding of associated professional knowledge.
 - c. An appreciation of the requirements for national security.
 - d. A strong sense of personal integrity, honor, and individual responsibility.
 - e. An educational background which will allow the NROTC students to perform successfully in later periods of their careers, advanced/continuing education in a field of application, and interest in the naval service.

- f. A high state of physical fitness for the purposes of health and performance.
 3. Intent. The intent of NROTC is to act as an officer accession program for the unrestricted line and to provide and maintain naval officer strength by:
 - a. Qualification of students for appointment as Ensigns in the regular Navy or Second Lieutenants in the regular Marine Corps.
 - b. Increased dissemination of knowledge concerning the Navy and Marine Corps and their purposes, ideals, and achievements, thereby gaining and holding increased public interest in the maintenance of adequate naval preparedness.
- B. Present an overview of the following NROTC scholarship programs and discuss the various requirements, opportunities and benefits for each.
 1. Four-Year Scholarship Program. Students are selected from national competition and are appointed Midshipman, Naval Reserve. They are granted compensation for a total period normally not to exceed four years (40 months). Certain technical majors may require additional time to complete the degree requirements. In such cases, extended scholarship benefits may be available. During this period of college, the Navy pays for tuition and required fees, and provides uniforms, a subsistence allowance, and a textbook stipend. The NROTC Scholarship Program is maintained to educate and train well-qualified young men and women for careers as commissioned officers in the Navy and Marine Corps. Upon appointment to commissioned grade, they will serve at the pleasure of the President as officers in the Navy or Marine Corps. They are obligated to serve a minimum of four years active duty after commissioning.
 2. Two-Year Scholarship Program. Students are selected through national competition from applicants with advanced college standing having at least two years of academic study remaining for a baccalaureate degree. They qualify for enrollment in the advanced course at colleges and universities in which NROTC units are located by successfully completing summer training (as prescribed above). The summer course of instruction, called the Naval Science Institute (NSI), provides the Naval Science and drill equivalent of the NROTC basic course. Those enrolled as Two-year Scholarship Program students have the same privileges and obligations as those enrolled in the Four-year Scholarship Program.
 3. Four-Year College Program. The NROTC College Program exists for those college students who wish to earn a commission and serve their country but did not, for whatever the reason, receive a scholarship. Most of these students desire to compete for an NSTC/OD-Controlled

Scholarship and will need to complete the academic requirements accordingly. If awarded a scholarship, they will proceed according to the scholarship guidelines. Should a student desire not to pursue a scholarship, but intends to earn a commission via the NROTC College Program (less stringent academic requirements), then this student will enter into an agreement with the Navy in which he/she agrees to complete certain Naval Science courses and one summer training period within the prescribed time lines. If selected for Advanced Standing College Program (nominated by the PNS at the end of their Naval Science sophomore year), the student becomes obligated just prior to commencement of the advanced courses (junior year in Naval Science standing). In return, the Navy provides uniforms, Naval Science textbooks, and a subsistence allowance for a maximum of 20 months. The college program student may be obligated to serve a minimum of three years on active duty after commissioning (three and one-half years if in the USMC).

4. Two-Year College Program. Students are selected by a board convened by NSTC from applicants with advanced college standing having at least two years of academic study remaining for a baccalaureate degree. They attend the Naval Science Institute (NSI). Those enrolled in the Two-Year College Program will have the same privileges and obligations as those enrolled in the Four-Year College Program.
5. NSTC/OD-Controlled Scholarship Program. Students who have received academic and aptitude marks in Naval Science for a period of at least one academic term may be nominated by the PNS for an NSTC/OD-Controlled Scholarship.
6. Seaman-to-Admiral 21 (STA-21) Program. Students are active duty enlisted personnel who apply and are selected by a board convened by NSTC. They attend NSI and then report to an NROTC unit to obtain a bachelor's degree in 36 months or less. Some STA-21 students will attend Broadened Opportunity for Officer Selection and Training (BOOST) prior to NSI.

C. Describe the organization of the NROTC academic program.

1. College academic major field of study. Midshipmen may elect to pursue any academic major provided they also complete the required Naval Science courses and the Navy-specified college courses. Students are encouraged to pursue majors in engineering, mathematics, or the physical sciences to meet technological requirements of the modern Navy. Nurse-option is also available; students apply and must be accepted to a School of Nursing. All students are encouraged to take courses in a foreign language.
2. Navy-specified college courses: Calculus (6 hrs), Calculus-based Physics (6 hrs), Military History/National Security Policy (3 hrs), Regional Studies/World

Cultures/Religions (3 hrs), and English (6 hrs).
(INSTRUCTOR NOTE: At the time of this writing, the
Regional Studies/World Cultures/Religions requirement is a
change to CNETINST 1533.12G.)

- a. Nurse-option students are exempt from all of these except English. (Note that a course in Regional Studies/World Cultures/Religions is also highly recommended; however, if the PNS determines the course cannot be completed without significant negative impact to degree and/or commissioning progression, the PNS may waive that requirement.)
 - b. Marine-option are exempt from taking Calculus and Physics. (A course in Regional Studies/World Cultures/Religions is highly recommended, although not required.)
 - c. College Programmers must take College Algebra or Advanced Trigonometry (6 hrs), Physical Science (6 hrs), Regional Studies/World Cultures/Religions (3 hrs), and English (6 hrs).
 - d. STA-21 Officer Candidates must take one year of Calculus and one year of Calculus-based Physics. (A course in Regional Studies/World Cultures/Religions is highly recommended, although not required.)
3. Naval Science courses: Introduction to Naval Science, Sea Power & Maritime Affairs, Leadership & Management, Navigation, Ships Systems I/Engineering, Ships Systems II/Weapons, Naval Operations & Seamanship, and Leadership & Ethics.
- a. Navy-option students complete all requirements.
 - b. Nurse-option students complete only Introduction to Naval Science, Sea Power & Maritime Affairs, Leadership & Management, and Leadership & Ethics.
 - c. Marine-option midshipmen complete Introduction to Naval Science, Sea Power & Maritime Affairs, Leadership & Management, and Leadership & Ethics, plus Evolution of Warfare and Amphibious Warfare.
 - d. STA-21 Officer Candidates have taken six of the eight required courses through their attendance at NSI. They are required to take the Leadership & Management and Leadership & Ethics courses at the university.
4. Naval professional training. Conducted during Naval Science laboratory/drill sessions, during physical fitness training periods, in the field by means of summer training assignments (cruises included), and on field trips and indoctrination visits.

5. Summer training programs. A summer training period is held annually to furnish NROTC midshipmen the opportunity to gain experience in the practical application of their studies in Naval Science. These training periods normally are four to six weeks in length. There are summer training programs in each of the three summers a 3-1/2 or four-year scholarship student is in the NROTC Program. Students who earn a scholarship while in the program will not attend summer training until after they have been on scholarship for a semester. Thus, students who earn a 3½-year scholarship are eligible for cruise during the following summer. (STA-21 OC's do not participate in summer training programs, as they are required to attend classes year round.)

- a. Third-class summer training: Career Orientation and Training for Midshipmen (CORTRAMID). Conducted between the freshman and sophomore academic years for all scholarship students, CORTRAMID introduces third-class midshipmen to the surface, aviation, submarine and USMC warfare communities. Nurse-option midshipmen participate in nurse at-sea cruises as third-class.
- b. Second-class summer training. Conducted between the sophomore and junior academic years for four-year scholarship students, it is normally at-sea training aboard a ship or submarine with an emphasis on the enlisted community for Navy-option. Second-class midshipmen who did not participate in CORTRAMID as third-class midshipmen may do so in lieu of the second-class cruise, if billets are available. USMC-option midshipmen will normally participate in mountain warfare training.
- c. First-class summer training. Conducted between the junior and senior academic years for all first-class NROTC midshipmen, it is normally at-sea (ship or submarine) training for Navy-option midshipmen and Officer Candidate School, Quantico, VA, for Marine-option midshipmen. Qualified first-class midshipmen may also opt for aviation, special warfare, and Foreign Exchange cruises during this summer. The first-class cruise for Nurse Corps midshipmen will be at a Naval hospital.

D. Discuss physical fitness requirements.

1. Physical Readiness Test (PRT)

- a. Objective. An essential part of the mission of the NROTC Program in preparing midshipmen for commissioning and subsequent duty is to ensure that they meet a satisfactory level of physical conditioning and are educated about the need and benefits of continuing personal fitness programs. As a measure

of individual physical fitness, midshipmen shall be required to pass semiannual tests.

- b. Performance standards. Midshipmen are encouraged to attain increasing levels of achievement as they progress through the program.
- c. Testing. To meet commissioning standards, Midshipmen must achieve a Good-Low overall, using the run time for the cardiovascular endurance score.
 - (1) Risk screening. Conducted prior to actual testing.
 - (2) Requirements. Navy-option midshipmen will run one and one-half miles for time, do a maximum number of push-ups in two minutes, do a maximum number of sit-ups in two minutes, and pass a sit-reach test. (As an option, and only if the unit has access to proper facilities and can conduct the evolution safely, students may complete the one-mile swim in place of the one and one-half mile run.) Marine-option midshipmen will run three miles and do pull-ups instead of pushups. Midshipmen who fail to meet the required scores on the Physical Fitness test will be subject to probation. Performance Review Boards (PRBs) will be held to assist in monitoring and encouraging success. A PRB is required upon the second failure. Disenrollment may result after two failures. Disenrollment will result after three failures.
 - (3) Fitness Enhancement Program (FEP). The FEP is designed to provide encouragement and support to achieving a healthy lifestyle that includes regular physical activity and a high level of physical fitness. This program is tailored to individual needs based on the current level of performance. It should be used to assist in remedial physical training for those below standard, to encourage more achievement by those individuals who barely meet the standards, and to reinforce the achievement of superior performers.

2. Swimming test

- a. Objective. It should be quite apparent that any Navy or Marine Corps officer **must** have excellent swimming abilities. The Navy goal is to enable one to not only take care of oneself, but also aid others when required.
- b. Performance standards. Swimming tests shall be given to students entering the NROTC Program during the

first term of their freshman year. Midshipmen must qualify as swimmer, third-class, by the start of the third-class year. Students qualifying as a swimmer, second-class, are exempt from further testing. Students qualified at lower than swimmer, second-class, must requalify annually. Qualification as swimmer, first-class, is required for flight in high performance aircraft during CORTAMID and follow-on aviation cruises, and will be administered by appropriate qualified personnel during the respective cruise.

3. Weight control and body fat. NROTC students whose body-fat percentage exceeds established standards contained in OPNAVINST 6110.1 (series) shall be required to accomplish additional physical conditioning and shall be encouraged to obtain professional dietary assistance, if necessary, to maintain an acceptable standard. Students shall not be permitted to enter the third-class year unless these standards have been met. College Program students shall not be admitted to advanced standing unless these standards are met. Failure to meet height/weight standards is a PRT failure. Remedial PT is akin to probation; a PRB should be held either before or upon second height/weight or PRT failure. Two failures may result in disenrollment, but three failures will result in disenrollment.
4. Marine-option students must adhere to USMC requirements.
5. STA-21 students report to the university after NSI, at which they must have passed the PRT with a Good-Low or better. Failure to maintain this standard may result in disenrollment from the program.

- E. Discuss the NROTC Honor Code and relate it to the obligations of officers in the U.S. Armed Forces. **A MIDSHIPMAN DOES NOT LIE, CHEAT, OR STEAL.**

(REMINDER TO INSTRUCTOR: Military systems, which often operate under extreme duress, are built on a foundation of absolute trust and fidelity. Midshipmen do not learn that concept when they get to the fleet; rather, they take it with them to the fleet!)

- F. The naval profession is rigorous and exacting and requires that officers constantly strive to perform to the best of their abilities if they are to successfully meet the demands of naval service. To ensure NROTC graduates are properly prepared to be officers, midshipmen must meet the following standards. (Refer to Chapter IV of CNETINST 1533.12.)

1. Standards of conduct
 - a. NROTC students are expected to conduct themselves per the standards of socially acceptable behavior and should present a favorable and positive military image at all times.

- b. Major and minor conduct offenses:
 - (1) Generally, major offenses are those that violate the NROTC Honor Code; indicate moral turpitude, a serious breach of discipline, a hardened disregard or contempt for authority, an incorrigible lack of energy and purpose, or a culpable lack of sense of responsibility; or that bring discredit upon the naval service.
 - (2) Minor offenses are those offenses of a less serious nature that involve comparatively minor infractions of instructions, orders, regulations, or grooming standards. Repeated infractions of a minor nature may be treated as a major offense.

2. Standards of aptitude

- a. Aptitude for the service describes an NROTC student's officer-like qualities, his/her potential as an officer, and his/her current performance in relation to his/her contemporaries.
- b. In determining the level of aptitude performance, the following factors will be considered:
 - (1) Development of habits of initiative, achievement, and motivation to enhance officer potential, particularly on cruise and during other training.
 - (2) Maintenance of high standards of personal honor and ethical behavior, bearing, physical fitness, and weight control.
 - (3) Compliance with all requests and administrative requirements of the NROTC Program.

3. Standards of performance

- a. Academic standards:
 - (1) Have no failing grade in any subject required for completion of degree or commissioning requirements, and maintain a satisfactory cumulative grade point average of 2.0 (on 4.0 scale).
 - (2) Maintain satisfactory overall progress toward completion of degree requirements within established program time limits, maintaining full-time student status per institution regulations.
 - (3) Work to full academic potential, striving to achieve the NROTC academic goal.

- b. Physical Readiness/swimming standards
- G. Performance Review Board (PRB). An administrative tool available to the PNS to review and make recommendations regarding the best course of action to be taken when a student fails to satisfactorily meet the conduct, aptitude, and/or performance standards of the NROTC Program.

(BACKGROUND INFORMATION FOR INSTRUCTOR: The Class Advisor will provide the midshipman or officer candidate timely performance counseling to correct any deficiencies prior to convening a PRB. This may include remedial counseling, warnings or probation, which can be assigned prior to a PRB.)

1. Procedure

- a. The affected student will be notified in writing at least seven days prior to the board. The student shall be given copies of all documents that will be presented before the board.
- b. The board will consist of at least three voting members and must be an uneven number. Voting board members may include other class advisors, other active or reserve officers, and one university official. The XO normally serves as the senior member of the board. The board also includes one non-voting member, referred to as the Recorder, who is normally the class advisor of the concerned midshipman or officer candidate. The non-voting member presents the case on behalf of the command.
- c. The concerned midshipman/officer candidate has the right to appear before the board, to submit a written statement, and to present documents or witnesses in his/her behalf. Since the PRB is an informal administrative proceeding, the midshipman/officer candidate is not entitled to be represented by an attorney at the hearing.

2. Disposition of finding

- a. No action.
- b. Warning.
- c. Probation. An administrative counseling tool, having no bearing on incurring obligation or receipt of benefits. Midshipmen will be notified of their status in writing, with the cause, terms, and period of the probation clearly specified.
- d. Leave of Absence (LOA). The PNS may deem it necessary to place a student on LOA due to continued unsatisfactory performance, specifically when there is genuine anticipation that the student may not be

capable of completing the program. When placed on LOA, all benefits are stopped immediately and are forfeited for the remainder of the semester the student is on LOA.

- e. Disenrollment. The PNS may recommend the disenrollment of any NROTC student whose overall record or specific academic failure makes his/her value as an officer suspect.

- 3. The PRB's recommendation is advisory only. The PNS may take any of the above actions after considering the board's recommendations.

H. Discuss the local NROTC unit military organization.

- 1. Unit chain of command, including names and ranks/rates of staff personnel.
- 2. Battalion chain of command, including names and ranks of midshipmen officers.
- 3. Student/command relationship.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 4

HOURS: 2.0

**TITLE: U.S. Navy Enlisted Rating Structure and Department of Defense Ranks,
Uniforms and Insignia**

I. Learning Objectives

- A. The student will know the Navy and Marine Corps rank/grade structures and insignia and will be able to relate them to their equivalents in the Army and Air Force.
- B. The student will know the general apprenticeship categories and the symbol for each Navy enlisted rating classification.
- C. The student will know the requirements for the advancement in rate/promotion and change of rating.
- D. The student will know the type of training utilized to qualify for rating classification.
- E. The student will know the uniform regulations for NROTC midshipmen.
- F. The student will demonstrate a knowledge of Navy/Marine Corps grooming standards.

II. References and Texts

A. Instructor references

- 1. NAVPERS 15665I, "U.S. Navy Uniform Regulations"
- 2. MCO P1020.34, "U.S. Marine Corps Uniform Regulations"
- 3. The Naval Officer's Guide, Chapter 8
- 4. The Marine Officer's Guide
- 5. The Bluejacket's Manual, Chapters 3 and 4, Appendix C
- 6. NAVPERS 18068 (Series), "Manual of Navy Enlisted Manpower Personnel Classification and Occupation Standards," Sections 1 and 2
- 7. NAVADMIN 209/04, "Navy Uniforms"

B. Student texts

- 1. The Naval Officer's Guide, Chapter 8
- 2. The Bluejacket's Manual, Chapters 3, 4

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Computer/projection system
- C. Course Coordinator CD-ROM and/or locally prepared PowerPoint slides
- D. Posters available from local recruiting command

IV. Suggested Methods and Procedures

- A. Method options: Have enlisted members of the command assist in answering questions/presenting material. Ensure enlisted members are fully up-to-date on material to be presented. Supplemental pictures and photos are also valuable.
- B. Have midshipmen wear the various midshipman uniforms for display to the class. Point out various components of the uniforms.

V. Presentation

- A. Explain the ever-increasing need for highly skilled enlisted personnel to support the fleet.
 - 1. Developments in technology.
 - 2. Loss of qualified personnel to civilian jobs
- B. Give the definition of the following: (Refer to Chapter 2, The Bluejacket's Manual.)
 - 1. Rating -- Duty calling for certain skills and aptitudes (BM, PC, BT, etc.)
 - 2. Rate -- The level of rating (E-1, E-6, E-9, etc.)
 - 3. Petty officer -- Pay grades E-4 to E-9
 - 4. Non-rated -- E-1 to E-3
 - 5. Recruit -- E-1 in general apprenticeship (i.e., airman recruit)
 - 6. Apprentice -- E-2, i.e., seaman apprentice
 - 7. Striker -- Person training for specific job in pay grades E-1 to E-3
 - 8. Military Operational Specialty (MOS) -- Basically the Marine Corps' equivalent to the Navy's rating
- C. Explain the difference between "rank" and "grade." Officers hold "grade" (i.e., Captain, Commander, etc.). One officer can out "rank" another based on "date of rank" (DOR). Note that grade and rank are often used interchangeably. (Refer to below

information and to Chapter 3 and Appendix C in The Bluejacket's Manual for Armed Forces Comparable Ranks and Abbreviations.)

- D. Explain the Navy's general rates, the color codes of their stripes, and their basic duties. (Refer to Chapter 3, The Bluejacket's Manual.)
1. Seaman (SN) -- White: Performs ship-related duties
 2. Hospitalman (HN) -- White: Assists doctors in performing medical care
 3. Dentalman (DN) -- White: Assists in dental care
 4. Fireman (FN) -- Red: Marine engineering and ship maintenance
 5. Construction (CN) -- Blue: Operates and services construction equipment
 6. Airman (AN) -- Green: Performs various duties for naval air activities
- E. Briefly describe the schooling system to train enlisted personnel.
1. Class "A": Provides basic technical knowledge required for job performance and later specialized training
 2. Class "C": Teaches advanced knowledge, skills, and techniques needed to perform a particular job
- F. Briefly describe eligibility requirements for advancement in rate or change in rating.
1. Time in rate (TIR) or time in grade
 2. Completion of personnel advancement requirements (PAR), which include special rating requirements, school and training requirements, occupational and military ability requirements
 3. Successful completion of specific military leadership exam, when required
 4. Successful completion of performance test, if required
 5. Importance of the recommendation given by the CO
 6. Meritorious promotion (Command Advancement Program/CAP)
- G. Discuss rating policies with respect to women (nearly all rates are now open) and the factors limiting access to those closed ratings. (Ensure updated information is provided on this subject.)
- H. Discuss procedures for determining a recruit's rating.

1. Armed Services Vocational Aptitude Battery (ASVAB) testing
 2. Navy Enlisted Classification (NEC) code
- I. Explain the difference between naval unrestricted line & staff officers (i.e., unrestricted line officers are eligible to get command of a ship or station; others are restricted line or staff corps officers.). These are covered in more detail in Lesson 15 and include:
1. Medical Corps (physicians/surgeons)
 2. Medical Service (pharmacist, medics, medical administration, etc.)
 3. Supply Corps
 4. Chaplain Corps
 5. Civil Engineering Corps
 6. Judge Advocate General
 7. Dental Corps
 8. Nurse Corps
 9. Intelligence Corps
- J. Department of Defense Comparable Ranks:

	Navy	USMC	USA	USAF	USCG
E1	Seaman/Airman/Fireman Recruit	Private	Private	Airman Basic	Seaman Recruit
E2	Seaman/Airman/Fireman Apprentice	Private First Class	Private	Airman Basic	Seaman/Airman/Fireman Apprentice
E3	Seaman/Airman/Fireman	Lance Corporal	Private First Class	Airman First Class	Seaman/Airman/Fireman
E4	Petty Officer Third Class	Corporal	Specialist/Corporal	Senior Airman	Petty Officer Third Class
E5	Petty Officer Second Class	Sergeant	Sergeant	Staff Sergeant	Petty Officer Second Class
E6	Petty Officer First Class	Staff Sergeant	Staff Sergeant	Technical Sergeant	Petty Officer First Class
E7	Chief Petty Officer	Gunnery Sergeant	Sergeant First Class	Master/First Sergeant	Chief Petty Officer
E8	Senior Chief Petty Officer	Master/First Sergeant	Master/First Sergeant	Senior Master Sergeant	Senior Chief Petty Officer
E9	Master Chief Petty Officer	Master Gunnery/Sergeant Major	Sergeant Major	Chief Master Sergeant	Master Chief Petty Officer

E10	Master Chief Petty Officer of the Navy	Sergeant Major of the USMC	Sergeant Major of the Army	Chief Master Sergeant of the USAF	Master Chief Petty Officer of the Navy
O1	Ensign	Second Lieutenant	Second Lieutenant	Second Lieutenant	Ensign
O2	Lieutenant Junior Grade	First Lieutenant	First Lieutenant	First Lieutenant	Lieutenant Junior Grade
O3	Lieutenant	Captain	Captain	Captain	Lieutenant
O4	Lieutenant Commander	Major	Major	Major	Lieutenant Commander
O5	Commander	Lieutenant Colonel	Lieutenant Colonel	Lieutenant Colonel	Commander
O6	Captain	Colonel	Colonel	Colonel	Captain
O7	Rear Admiral (Lower Half)	Brigadier General	Brigadier General	Brigadier General	Rear Admiral (Lower Half)
O8	Rear Admiral (Upper Half)	Major General	Major General	Major General	Rear Admiral (Upper Half)
O9	Vice Admiral	Lieutenant General	Lieutenant General	Lieutenant General	Vice Admiral
O10	Admiral	General	General	General	Admiral (Commandant)

K. U.S. Navy and Marine Corps uniform regulations

1. Uniforms. Uniform regulations are promulgated in U.S. Navy Uniform Regulations and U.S. Marine Corps Uniform Regulations. [Instructors are encouraged to show uniform photos (see Course Coordinator CD-ROM) and to display both sets of regulations.]
 - a. Brief history. Note that the Navy/Marine Corps uniform marks the officer as a professional -- a member of a military service over 200 years old.
 - b. Description of types of uniforms
 - (1) Officer. Discuss the different uniforms worn at the unit throughout the year. Also, mention the use of flight suits, coveralls, ball caps, etc., from fleet experience.
 - (a) Men's uniform
 - (b) Women's uniform
 - (2) Enlisted. Clarify the difference between "rate" and "rating." "Rate" is a pay-grade within a "rating." ("Rating" refers to a

particular skill/job.) In the Marine Corps, "designator" and MOS is the same as a rating.

(a) Men's uniform

(b) Women's uniform

c. Occasions for wear

(1) Different events call for various uniforms.

(2) Discuss the specific guidance identified in the U.S. Navy Uniform Regulations and/or U.S. Marine Corps Uniform Regulations.

d. Authority to prescribe uniform

(1) *Uniform of the Day* is prescribed for all naval personnel within a command or geographical area.

(2) The area/regional coordinators are the prescribing authority and are responsible for issuing and controlling uniform policies within their respective geographical territories. The coordinators designate a uniform for the season, day, or special occasion.

(3) Afloat or ashore outside the jurisdiction of the area/regional coordinator is the responsibility of SOPA (Senior Officer Present, Afloat).

e. Travel in uniform

(1) Service dress blues (Navy) and service dress alphas (Marine Corps) are always appropriate.

(2) For travel within a region, wear either the uniform of the day as prescribed for the destination or SDBs/SDAs for the entire trip.

(3) For travel between regions, wear either the uniform of the day for destination or point of departure for actual travel. A change to the uniform of the day at the destination is required to conduct business. (SDBs/SDAs may be worn for the entire trip.)

f. Special uniforms. Officers wear aiguillettes when assigned special duties. There are a whole host of special uniforms that don't apply to NROTC midshipmen. If the occasion arises to wear a special uniform, refer to the U.S. Navy Uniform Regulations or U.S. Marine Corps Uniform Regulations.

(1) Ceremonial

- (2) Band
 - (3) Security
 - (4) Special duty personnel
 - (5) Protective clothing
- g. Wearing articles of uniform with civilian clothes. Military personnel may wear the following military uniform items with civilian clothes:
- Command ball cap
 - Belts with civilian buckles
 - Four-in-hand necktie
 - Gloves
 - Socks/Hosiery
 - Shoes
 - Underwear
 - All-weather coat/raincoat without insignia
 - Windbreaker without insignia
 - Sweaters\government-prescribed cardigan & blue pullover sweaters\blue (wooly pully) if nametag removed
 - Watch cap
 - Purse
- h. Uniform requirements. (Since each command will dictate what is needed, discuss personal experience in uniform requirements.)
- (1) Male officers
 - (2) Female officers
- i. Standards for correct wear and appearance of the uniform
- (1) Personnel should have the correct uniform (all parts).
 - (2) Uniform should be cleaned and pressed and have the proper insignia.
 - (3) Personnel should check U.S. Navy Uniform Regulations or U.S. Marine Corps Uniform Regulations if unsure about uniform etiquette.
 - (4) Stress leadership responsibilities of proper role model for junior personnel in wearing uniforms correctly.

2. Insignia

- a. Male/female commissioned and warrant officers

- (1) Cap insignia. (See The Bluejacket's Manual.)
 - (a) Cap visor
 - (b) Cap device
 - (c) Chin strap
 - (2) Sleeve insignia (rank stripes)
 - (3) Sleeve line and staff corps devices (See The Bluejacket's Manual.)
 - (4) Shoulder insignia for blue all-weather coats/raincoats and khaki jackets
 - (5) Grade insignia (on collar) for khaki shirts and blue shirts, long and short sleeve. (Draw a proper collar position on the board using guidance from U.S. Navy Uniform Regulations or U.S. Marine Corps Uniform Regulations.)
 - (a) Collar position (different between Navy and Marine Corps)
 - (b) Outer garment position
- b. Officer accession program (NROTC) male/female
- (1) Cap insignia
 - (2) Cap device
 - (3) Chin strap
 - (4) Garrison cap. Miniature golden fouled anchor on left side of the cap.
 - (5) Sleeve class insignia
 - (6) Sleeve rank insignia
 - (7) Midshipmen petty officers. (Show actual patches from unit as example of midshipman MPO, CPO, SCPO, MCPO.)
- c. Enlisted
- (1) Headgear insignia
 - (a) E-1 to E-6 Navy: White cap, also called "dixie cup."
 - (b) E-1 to E-9 Marine Corps: Garrison cover or barracks cover.
 - (2) Rating badge

- (3) Collar insignia (CPO and Marine Corps)
- (4) Specialty marks (rating)
- (5) Service stripes
- (6) Striker's marks (Navy)

d. Breast insignia (See The Bluejacket's Manual.)

L. Navy/Marine Corps grooming standards

- 1. General grooming standards (based on standards such as neatness, cleanliness, safety, military image, and appearance). The primary consideration is to have a neatly groomed appearance while wearing uniforms.
- 2. Grooming standards: Men
 - a. Hair
 - (1) Neat, clean, well-groomed, and closely trimmed, not to interfere with headgear.
 - (2) Above ears and around neck shall be tapered upward at least 3/4 inch and outwards not greater than 3/4 inch to blend with hair style.
 - (3) Hair on back of the neck should be shaved so as to not touch the collar.
 - (4) The hair may not exceed four inches in length for USN and three inches for USMC, should never touch the ears or collar, and should be tapered around the sides and neck.
 - (5) The hair will not exceed two inches of bulk. (Bulk is defined as the distance that the mass of the hair protrudes from the scalp.)
 - (6) Hair coloring must look natural and complement the individual. Faddish styles and outrageous multicolored hair are not authorized.
 - b. Mustache/Sideburns. Will be kept neatly and closely trimmed. No portion will extend below the lip line of the upper lip. (See the U.S. Navy Uniform Regulations or U.S. Marine Corps Uniform Regulations for specific guidance.)
 - c. Wigs/Hair pieces. They are not to interfere with the proper performance of duty, or present a safety or FOD hazard.

- (1) Navy. Both may be worn while in uniform only for cosmetic reasons to cover natural baldness or physical disfigurement.
 - (2) Marine Corps. Members of the Selected Marine Corps Reserve may wear wigs/hair pieces only during times of inactive duty.
 - d. Rings/Necklaces
 - (1) While in uniform, only one ring per hand (inconspicuous) is authorized, plus a wedding ring.
 - (2) Necklaces will not show above the shirt line.
- 3. Grooming standards: Women
 - a. Hair
 - (1) Clean, neatly shaped, and arranged in an attractive, feminine and professional style.
 - (2) Faddish and exaggerated styles are prohibited.
 - (3) When in uniform, hair on back of the head may touch, but not fall below, the lower edge of the collar.
 - (4) Long hair, including braids, must be neatly and inconspicuously fastened, pinned, or secured to the head presenting an attractive hairstyle and may not dangle free at any point.
 - (5) The bulk of the hair shall not exceed 2 inches. (Bulk is defined as the distance that the mass of the hair protrudes from the scalp.) Headgear must fit properly.
 - b. Fingernails. Shall not exceed ¼-inch measured from fingertip. Nail polish colors will compliment the skin tone.
 - c. Hair ornaments
 - (1) Conspicuous rubber bands, combs, and pins are not authorized.
 - (2) When worn, hair ornaments shall not present a safety or FOD hazard.
 - (3) A maximum of two barrettes, similar to hair color, may be used to pin hair.
 - d. Cosmetics

- (1) Shall be applied in good taste so colors blend with natural skin tone and enhance natural features.
 - (2) Lipstick colors shall be conservative and complement the individual.
 - (3) Long, false eyelashes shall not be worn when in uniform.
- e. Rings/Necklaces
 - (1) While in uniform, only one ring per hand is authorized, plus an engagement ring (or wedding ring set).
 - (2) Necklaces will not show above neckline of blouse.
- f. Earrings. Post-style, brushed matte finish, small sphere
 - (1) Officers: Gold-colored
 - (2) Enlisted: Silver-colored
- 4. Decorations/Awards. (Briefly explain how worn.)
- 5. Ownership markings. (Briefly explain how displayed or applied.)

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 5

HOURS: 2.0

TITLE: Naval Traditions, Customs, Honors and Courtesy

I. Learning Objectives

- A. The student will know the customs and traditions of the Navy and the Marine Corps and relate them to current usage.
 - 1. The student will know the definition of custom and its origin.
 - 2. The student will know the definition of tradition and its origin.
 - 3. The student will know the legal effect of customs in the naval service.
- B. The student will demonstrate proper procedures for conducting morning and evening colors.
- C. The student will know (and demonstrate on cruise) proper shipboard protocol with respect to quarterdeck procedures, wardroom etiquette, boarding and disembarking, honor to passing ships, and boat etiquette, and will demonstrate proper military etiquette for social situations.
- D. The student will know and practice basic American flag etiquette.

II. References and Texts

- A. Instructor references
 - 1. U.S. Navy Regulations
 - 2. The Naval Officer's Guide, Chapters 5, 6
 - 3. Division Officer's Guide
 - 4. Service Etiquette
 - 5. The Bluejacket's Manual
 - 6. The Marine Officer's Guide
 - 7. Naval Ceremonies, Customs and Traditions
 - 8. Naval Orientation
- B. Student texts
 - 1. The Naval Officer's Guide, Chapters 5, 6

2. The Bluejacket's Manual, Chapter 6

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Computer/projection system
- C. Locally prepared handouts
- D. Course Coordinator CD-ROM

IV. Suggested Methods and Procedures

- A. Method options
 - 1. Relate the material to personal experiences and upcoming social events.
 - 2. Using local retired naval officers or senior petty officers to present this subject matter adds to its dimension.
 - 3. Establish the entry to the classroom as a "Quarterdeck" and have students "disembark" from class.
- B. Procedural and student activity options: Furnish and discuss locally prepared handouts.

V. Presentation

- A. Military courtesy -- The "salute"
 - 1. History of the salute
 - a. Days of chivalry. Knights raised visors to friends for identification.
 - b. Borgais. Assassination by dagger was common. It was customary to approach other men with raised hand.
 - c. U.S. Navy. A tradition that is a modified old Royal Navy military courtesy (juniors in the Royal Navy would uncover when addressing seniors) that was shortened to the salute as we know it today.
 - d. Significance of the salute today.
 - (1) Time-honored tradition of courtesy among military personnel
 - (2) Expression of mutual pride and respect
 - 2. Types of salutes (demonstrate each)
 - a. Hand salute

- b. Hand salute under arms
 - c. Present arms
 - d. Sword salute
 - e. "Eyes right" when passing in review
3. Saluting situations
- a. Aboard naval vessels
 - (1) Reporting aboard. FOR OFFICERS ONLY. Salute national ensign, then salute OOD and say:
 - (a) Vessel assigned to: "I report my return aboard sir/ma'am."
 - (b) Vessel not assigned to: "I request permission to come aboard, sir/ma'am."
 - (2) Disembarking vessel. Salute OOD, then salute national ensign and say:
 - (a) Vessel assigned to: "I have permission to...(go ashore, leave the ship, etc), sir/ma'am."
 - (b) Vessel not assigned to: "I request permission to...(leave the ship, go ashore, etc), sir/ma'am."
 - (3) Salute officers at the first meeting of the day.
 - (4) Salute the CO and all officers senior to him/her on every meeting.
 - b. Aboard small boats
 - (1) Personnel in charge of the boat not underway salute officers that come alongside or pass nearby.
 - (2) Boat coxswain salutes all officers entering or leaving the boat.
 - (3) If underway and passing another boat, the junior salutes the senior. The coxswain and the senior officer in each boat salute. Other officers will remain seated and salute. The coxswain will stand if safe to do so.
 - (4) During morning or evening colors, the boat will lie to, and the coxswain and/or boat officer will come to attention and salute. All others will remain seated.

- c. During the national anthem
 - (1) Not in formation and covered. Stand at attention, face the national ensign or the direction of the music, salute upon hearing the first note and hold until the last note is played.
 - (2) In formation and covered. Formation is brought to attention/order arms. The formation commander faces national ensign or music and renders the salute for the formation.
 - (3) Uncovered. Face national ensign or music and stand at attention.
 - (4) If in civilian clothes, remove hat, stand at attention, place right hand over heart.
 - (5) These rules apply to foreign national anthems as well.
- d. National ensign
 - (1) When passed by or passing the national ensign as it is being carried, or is uncased, or is in a military formation, all naval personnel shall salute.
 - (2) Salute when boarding or disembarking vessels.
 - (3) This also applies to foreign national ensigns.
- e. Military funerals
 - (1) Naval personnel remain covered while in the open, but uncovered during the committal service at the grave.
 - (2) During burial service at sea, all personnel remain covered throughout the committal.
 - (3) As a general rule, personnel remain covered for military ceremonies, but uncovered for religious ceremonies.
 - (4) Personnel render salutes whenever honors are rendered.
- f. In buildings
 - (1) Do not salute unless in the official capacity (watch).

- (2) Salute in buildings only when failure to do so might cause embarrassment or a misunderstanding (i.e., at Army or Air Force).
 - (3) When reporting to an office, do not render a salute.
- g. Outside
 - (1) If seated, a junior should rise and face the senior and render a salute and appropriate greeting.
 - (2) When reporting on deck or outside ashore, naval personnel will be covered and will render a salute.
- h. In vehicles
 - (1) Juniors salute all seniors who are riding in vehicles.
 - (2) Those officers in the vehicle will return salutes as required.
 - (3) The driver of the vehicle is obliged to salute if stopped, but has the option when moving for safety reasons.
- i. Overtaking
 - (1) When a junior passes a senior, pass to the left, salute when abreast and say: "By your leave, sir or ma'am." The senior will return the salute and say: "Very well" or "Carry on."
 - (2) If seniority is unknown, salute! If in doubt, always salute.
- j. Walking with a senior
 - (1) Always walk to the left of the senior.
 - (2) If the senior is saluted by personnel who are senior to the officer, do not salute until the senior officer salutes.
- k. Meeting seniors
 - (1) Render salute at six paces or the nearest point of approach.
 - (2) Hold salute until returned.
 - (3) Accompany salutes with a greeting: "Good morning/afternoon/evening, sir or ma'am."

- (4) Salutes are rendered to all officers of the Navy, Army, Air Force, Marine Corps, Coast Guard, foreign military officers, and civilian officials who rate gun salutes.

l. Relieving the watch

- (1) "I am ready to relieve you, sir/ma'am." (salute)
- (2) "I am ready to be relieved." (salute)
- (3) "I relieve you, sir/ma'am." (salute)
- (4) "I stand relieved."

m. When not to salute

- (1) When uncovered
- (2) In formation, except on command
- (3) In a work detail (person in charge salutes)
- (4) When engaged in athletics
- (5) If both hands are full
- (6) In public places, when inappropriate (e.g., restaurant)
- (7) In public conveyances
- (8) At mess

n. WHEN IN DOUBT, SALUTE!

o. If a junior does not render a salute:

- (1) Sternly request an immediate conference with that individual. (e.g., "Petty officer, please come over here.")
- (2) Remind the individual of the necessity for respect and deference to seniors.
- (3) Obtain a proper salute from the individual.

p. Define the rank of midshipman with respect to seniority.

B. Shipboard courtesy

1. Quarterdeck

a. Honored, ceremonial part of a ship

- b. Use proper boarding and disembarking procedures.
 - c. Keep immaculate and ceremonial.
 - d. Don't appear on the quarterdeck out of uniform.
 - e. Smoking is not allowed in this area.
 - f. Keep hands out of pockets.
 - g. Do not engage in horseplay.
 - h. Officer of the deck is in charge and represents the CO.
 - (1) Responsible for the safety and security of the ship.
 - (2) All officers are subordinate except XO and CDO.
 - (3) The same rules apply if the OOD is enlisted.
 - (4) Discuss the OOD's authority and relationship with POOW, messenger.
- 2. Boat etiquette/vehicle etiquette
 - a. Seniors board last and leave first.
 - b. Seniors sit towards the aft while juniors sit forward.
- 3. Officers in or near enlisted spaces (mess decks, berthing)
 - a. Treat with respect.
 - b. Always uncover if on the mess deck.
 - c. These spaces are the enlisted person's home.
- 4. Officers in sick bay
 - a. Uncover prior to entering (deference to sick or injured).
 - b. Smoking is not allowed.
- 5. Officers in officer country and CPO mess. (Define the terms.)
- C. Military courtesy. Responses to senior officers:
 - 1. "Yes, sir/ma'am."
 - 2. "No, sir/ma'am."

3. "Aye, aye sir/ma'am." (I understand and will carry out your order, sir/ma'am.)
 4. "I do not know, but I will find out, sir/ma'am."
 5. "No excuse, sir/ma'am." (Accept responsibility; don't blame others.)
- D. Relationships between officers and enlisted
1. Demonstrate mutual respect.
 2. Never become "buddy buddy." There is a fine line between being one of the boys and being the leader. This concept is often difficult for young officers to grasp.
 3. Personal dignity is critical to successful leadership.
 4. Be friendly and approachable.
 5. Be fair, consistent and, above all, firm.
 6. Maintain a calm, cool and collected disposition. Never "sweat the load" in front of troops.
 7. Praise in public, but reprimand in private.
- E. Courtesy towards women
1. Acceptable to maintain civilian courtesies (e.g., open doors, ladies first, etc.).
 2. End responses with "ma'am."
- F. Religious services
1. Uncover.
 2. Observe respect for religious observances on ship.
 - a. Maintain quiet.
 - b. No horseplay or card playing during services.
 3. The church pennant is the only flag to fly above the national ensign.
- G. Courtesy calls
1. Call on CO aboard ship or station within 48 hours of reporting. This is normally arranged by the XO.
 2. Call at the home of the CO, XO, and department head within two weeks of reporting. If married, the spouse should accompany the officer. This courtesy is normally covered by a "hail and farewell" party.

H. Correspondence

1. When addressing members down the chain of command, or personnel of lesser rank than the officer, sign "Respectfully," or "R."
2. When addressing members up the officer's chain of command, or officers higher in rank, sign "Very respectfully," or "V/R."

I. Relations between junior and senior officers

1. Always treat with respect/deference.
2. Don't "bad-mouth" seniors.
3. Uncover when entering a room in which a senior is or is expected.
4. Come to attention when a senior enters.
5. Be punctual. Report back promptly when tasked for action.
6. Treat a request from a senior as an order.
7. Never extend a handshake to a senior first. Let him/her initiate the handshake.
8. Never jump the chain of command.

J. Wardroom etiquette

1. All officers belong to the wardroom mess.
2. The officer will be asked to contribute to the wardroom mess fund in order to establish and maintain membership.
3. The mess treasurer handles the money and is an elected member.
4. President of the mess
 - a. CO on small ships
 - b. XO on large ships
5. Seating
 - a. CO, XO, department heads
 - b. The mess caterer sits opposite to the CO (president).
6. Rules of etiquette
 - a. Remove cover prior to entering the mess.
 - b. Always be in the proper uniform.

- c. If necessary to leave the mess early, the officer will excuse him or herself to the senior officer present.
- d. Introduce any guests to others.
- e. Never show up late for the mess. If unavoidable, apologize and request permission to join.
- f. Don't loiter about the mess during working hours.
- g. Don't be noisy or boisterous.
- h. Don't talk shop, religion, or politics.
- i. Pay mess bill promptly.
- j. Wait for the senior member to sit before the officer does.
- k. No enlisted personnel allowed.

K. Honors and Ceremonies

1. Basic American Flag Etiquette

a. Saluting the Flag

(1) In uniform:

- (a) Salute the flag when it is six paces from the viewer and hold it until the flag has passed six paces beyond.
- (b) Salute the flag at the first note of the National Anthem and hold the salute until the last note is played.

(2) In civilian attire:

- (a) Men should remove hats and hold at left shoulder with hand over heart; without hat, place right hand, palm open, over heart. Women should place right hand, palm open, over heart.
 - (b) In athletic clothing, face the flag or music, remove hat or cap, and stand at attention.
- b. When marching - Carry the flag on the right in any procession or parade. If there are many other flags, carry the flag in the center position.

- c. On a vehicle - Attach the flag to the antenna or clamp the flagstaff to the right fender. Do not lay the flag over the vehicle.
- d. Carrying the flag - Hold the flag at a slight angle from your body. You can also carry it with one hand and rest it on your right shoulder.
- e. Placing on flag stand
 - (1) Multiple staffs - If you display the flag on a staff with other flags around it, place the flag at the center and highest point.
 - (2) Crossed staffs - Keep the flagstaff higher and on its own right.
- f. Draping on a casket - Drape the flag with its canton at the head and over the left shoulder of the body. Do not lower the flag into the grave.
- g. Hanging the flag
 - (1) On a building - Hang the flag on a staff or on a rope over the sidewalk with the stars away from the building.
 - (2) Over the street - Hang the flag with the stars to the east on a north-south street or north on an east-west street.
 - (3) Above other flags - Hang the flag above any other flag on the same pole.
 - (4) Flying at half-mast - Signifies mourning. Raise the flag to the top of the pole; then lower it to the halfway point. At the end of the day, raise it to the top of the pole before lowering it.
 - (5) Upside down - An upside down flag is considered a distress signal.
 - (6) In a window - Hang the flag vertically with the stars to the left of anyone looking at it from the street.
 - (7) Other flags/separate poles - Hang all flags on equal poles. Hang the U. S. flag on its own right; hoist it first and lower it last.
- h. On the podium
 - (1) Behind a speaker - Hang the flag flat on the wall. Do not decorate the podium or table with the flag; use bunting for decoration.

- (2) Next to a speaker - Place the flag in a stand on the speaker's right. Use the same placement for a religious service.
 - i. Handling and Disposal - The flag should never be allowed to touch or drag on the ground. The only proper way to dispose of faded or torn flags is to burn them. They should never be discarded in the trash.
2. Morning and evening colors
- a. Morning colors
 - (1) At 0800, raise the national ensign.
 - (2) The color guard of the day or the band is paraded near the point of hoisting the ensign.
 - (3) Five-minute warning bugle call is sounded/"prep" pennant raised (aboard ships).
 - (4) At 0800, "attention" is sounded on the bugle, followed by the national anthem. "To the colors" may be sounded by the bugler in place of the anthem/"prep" pennant dipped (aboard ships).
 - (5) The national ensign is hoisted smartly at the beginning of the music to the peak or truck of the flag pole. The union jack is hoisted in a similar manner aboard ships.
 - (6) At the completion of the music, "carry on" is sounded by the bugler/"prep" pennant lowered (aboard ships).
 - b. Evening colors
 - (1) At sunset, lower the national ensign.
 - (2) The color guard of the day or the band is paraded near the point of lowering the ensign.
 - (3) A five-minute warning is sounded on the bugle/"prep" pennant raised.
 - (4) At the time of colors, "attention" is sounded on the bugle, followed by the national anthem or "retreat" by bugler/"prep" dipped.
 - (5) The ensign is started down at the beginning of the music, and the lowering is regulated so as to be completed on the last note of the music.

NOTE: If driving in a vehicle and within sight or hearing of colors, pull over and stop, and sit at

attention until completion of colors. If walking, stop, turn toward the colors and render a hand salute.

3. Gun salutes. (See Chapter 5 of The Naval Officer's Guide.)
 - a. Occasions for salutes are prescribed in Article 1013 of U.S. Navy Regulations
 - (1) Honors given for the President of the U.S., civilian dignitaries, flag officers, foreign officials on official visits.
 - (2) Recognition of foreign nations
 - (3) Celebration of Independence Day
 - b. Procedures are outlined in Naval Orientation, pp. 8-3 to 8-6
4. Passing honors between ships or to officials and officers embarked in small boats
 - a. Given when ships or boats pass "close aboard"
 - (1) 600 yards for ships
 - (2) 400 yards for boats
 - b. Procedure between ships. "Attention" is sounded by the junior vessel when the bow of one ship passes the bow or stern of the other vessel.
 - (1) One short whistle signals "attention to starboard."
 - (2) Two short whistles signal "attention to port."
 - (3) All personnel topside come to attention.
 - (4) The senior vessel comes to attention.
 - (5) The junior ship sounds "hand salute" (one whistle) and all personnel not in ranks will salute.
 - (6) The senior ship returns salute.
 - (7) The senior ship sounds "ready, two" (two whistles) and all personnel drop salute.
 - (8) The junior ship drops salute after senior ship.
 - (9) The senior ship sounds "carry on" (two whistles).
 - (10) The junior ship sounds "carry on."

- c. Dispensing with honors
 - (1) Honors are not rendered before 0800 or after sunset unless international courtesy requires it.
 - (2) Not exchanged between U.S. naval vessels engaged in tactical evolutions outside of port.
 - (3) The senior officer may dispense with honors.
 - (4) Honors are not rendered or required by vessels with small bridge areas such as submarines.
- 5. Procedure between ships and small boats
 - a. Personnel on the quarterdeck of a large vessel render honors to senior officers that pass in small boats. A salute is rendered when the boat is abreast of the quarterdeck.
 - b. Discuss boat hails by OOD; coxswains' response
- 6. Crew at quarters on entering or leaving port
 - a. Leaving or returning for/from deployment
 - b. Visits to foreign ports
 - c. Special occasions as determined by the CO
 - d. Two different procedures:
 - (1) "Man the rail." The crew, dressed in uniform of the day, lines the railing on the side of the ship facing the pier.
 - (2) Parade at Quarters. Crew will muster in formation for quarters.
 - e. Procedures are dispensed with in foul weather.
- 7. Half-masting the national ensign and union jack
 - a. For deceased official or officer as directed
 - b. When directed by a higher authority
 - c. Procedures
 - (1) If colors are already raised, lower to half-mast.
 - (2) If colors are not yet raised, hoist as usual to top of mast, and then lower to half-mast.

- (3) When lowering the ensign from half-mast, raise the colors to the top of the mast or truck, then lower as usual.
- 8. Honors at official inspections
 - a. Honors are rendered as for an official visit depending on senior inspector's rank.
 - b. Upon departure of the inspecting officer, the flag of the inspector shall be hauled down.
- 9. Displaying of personal flags and pennants
 - a. Flag officers are entitled to personal flags.
 - (1) Navy: Blue flag with white stars
 - (2) Marines: Red flag with gold stars
 - b. When a flag officer eligible for command at sea is embarked on a ship, his/her flag is displayed.
 - c. The flag is also displayed on small boats and vehicles when the flag officer is aboard.
 - d. Non-flag officers
 - (1) *Broad* command pennants indicate command of:
 - (a) Division of CVs or CGs
 - (b) A force, flotilla, or squadron of ships or craft of any type
 - (c) An aircraft wing
 - (2) *Burgee* command pennants indicates command of:
 - (a) A division of ships or craft other than CVs or CGs
 - (b) A major subdivision of an aircraft wing
 - (3) *Starboard* pennant indicates senior officer present afloat (SOPA).
- 10. Bow and flagstaff insignia for boats. (See Chapter 5, The Naval Officer's Guide.)
 - a. A boat assigned to an officer for regular personal use carries an insignia on each bow as follows:
 - (1) For a flag officer, stars as arranged on his/her flag

- (2) For a unit commander, a replica of the command pennant
 - (3) For a CO or chief of staff who is not a flag officer, an arrow
 - b. The boat flagstaff for the ensign (made of brass) is fitted at the peak with:
 - (1) A spread eagle for an officer or official who rates 19 or more guns
 - (2) A halberd for a flag officer who rates less than 19 guns or a civilian who rates 11-19 guns
 - (3) A ball for an officer of the grade, or relative grade of captain
 - (4) A star for a Navy commander, or relative grade
 - (5) A flat truck for officers below commander
- 11. Dressing/Full dress ship -- in port from 0800 until sunset
 - a. Dress ship
 - (1) All national holidays, except the Fourth of July
 - (2) When directed by a higher authority
 - (3) "Holiday" ensign (largest) is at flagstaff, jack at the jackstaff
 - (4) National ensign at each masthead
 - b. Full-dress ship
 - (1) Fourth of July, Washington's birthday and when directed by a higher authority
 - (2) Same flag arrangements as in dress ship
 - (a) Additionally, a rainbow of signal flags runs from the foot of the jackstaff to the mastheads and then to the foot of the flagstaff.
 - (b) When dressing ship for a foreign holiday, that nation's flag is hoisted at the main mast in place of the U.S. flag.
- 12. Ceremonies for national holidays
 - a. Washington's birthday and Fourth of July

- (1) Full-dress ship
 - (2) 21-gun salute
 - b. Memorial Day
 - (1) National ensign is half-masted when first hoisted at morning colors.
 - (2) At 1200, a special 21-gun salute is sounded. At the conclusion of the firing, the national ensign is hoisted to the peak and flown that way for the remainder of the day. If a 21-gun salute cannot be fired, the ensign is raised to the peak at precisely 1220.
 - c. Other national holidays
 - (1) Dress ship
 - (2) Holiday routine for crew
- L. Dining-in/Dining-out
 - 1. Formal dinners given by members of a naval unit, in order to demonstrate esprit de corps.
 - 2. Dining-in. Only military officers from that unit.
 - 3. Dining-out. Military officers and their civilian spouses or friends.
 - 4. Describe a typical dining-in/out:
 - a. The dinner
 - b. Toasts
 - c. "Fines"
 - d. Decorum
- M. Significance of naval customs and traditions
 - 1. First duty of every member of the naval service is to learn and conform to customs and traditions. It is the responsibility of everyone to know Navy heritage.
 - a. Etiquette and discipline are founded upon customs and traditions.
 - b. Discuss the importance and influence that these elements have on the members of the Navy.
 - c. Explain as a process of socialization and learning a form of "corporate culture."

2. Discuss/define "custom" -- Acts which are uniformly followed over a long period of time; a time-honored set of practices that have the force of a law.
 3. Discuss/define "tradition" -- The passing down of elements of a culture from generation to generation; developed from the performance of our own personnel.
 4. Discuss the relevance of the Navy (13 October 1775) and Marine Corps (10 November 1775) birthdays with respect to customs and traditions.
 5. Discuss key figures within the naval service with considerable impact upon the continuation of Navy tradition.
 - a. John Paul Jones. He founded the tradition of dedication to duty and perseverance: "I have not yet begun to fight!"
 - b. Stephen Decatur. He exemplified the attributes of initiative and action.
 - c. Oliver Hazard Perry. He, like Jones, was determined not to give up the ship. Perry fought on until he was able to claim: "We have met the enemy and they are ours."
 - d. David Farragut. He displayed unswerving commitment to leadership instead of following and was characterized by his bold, decisive action: "Damn the torpedoes, four bells Captain Drayton. Go ahead Jouett-full speed."
 - e. William Simms. Innovative in thought (convoys were the savior of Great Britain in WWI).
 - f. William "Bull" Halsey. He personified the Navy tradition of striking fast, hitting hard and fighting to win.
 - g. Howard Gilmore. His selfless sacrifice on behalf of his crew and ship (CO, USS *Growler*).
- N. Define the following customs, how each began, and their continuing importance in today's Navy.
1. Tending the side
 2. Dipping the ensign
 3. Ship launchings/commissionings
 4. Captain's mast
 5. "Crossing the line"

- O. Summary. The character of the U.S. Navy did not just happen; it was forged through time and experience -- out of tradition. Take pride in our naval customs and traditions. Uphold our rich heritage through your actions, conduct, appearance and attitude.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 6

HOURS: 1.0

TITLE: Navy Regulations and the Uniform Code of Military Justice

I. Learning Objectives

- A. The student will comprehend the purpose, scope, and constitutional basis of U.S. Navy Regulations and the Uniform Code of Military Justice and relate these regulations to personal conduct in the military service.
- B. The student will comprehend junior officer responsibilities relative to the military justice system, including familiarization with nonjudicial punishment, courts-martial, and essential publications relating to military justice.
 - 1. The student will know the proceedings of nonjudicial punishment (NJP) and the punishment that may be awarded at NJP proceedings.
 - 2. The student will know the three types of courts-martial and the system of courts-martial review.
- C. The student will know the Secretary of the Navy's Standards of Conduct required of all naval personnel.

II. References and Texts

A. Instructor references

- 1. U.S. Navy Regulations
- 2. Manual for Courts-Martial
- 3. JAGINST 5800.7 (Series), "Manual of the Judge Advocate General"
- 4. Naval Law
- 5. DOD Directive 5500.7 (series), "Standards of Conduct"
- 6. DOD 5500.7R, "Joint Ethics Regulation (JER)"
- 7. Department of the Navy Ethics website, "The Ethics Compass," at: <http://ethics.navy.mil>
- 8. The Naval Officer's Guide, Appendix 3
- 9. A Commander's Quick Reference Manual for Legal Issues
- 10. The Bluejacket's Manual, Chapter 5

B. Student texts

1. The Naval Officer's Guide, Appendix 3
2. The Bluejacket's Manual, Chapter 5

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Course Coordinator CD-ROM
- C. Computer/projection system

IV. Suggested Methods and Procedures: Lecture, using Course Coordinator CD-ROM and student handout.

V. Presentation

- A. Discuss the purpose and force of U.S. Navy Regulations as the principal regulatory document.
 1. Principal regulatory document of the Department of the Navy (DON).
 2. No other directive in the DON may conflict, alter, or amend U.S. Navy Regulations.
- B. Review the content of U.S. Navy Regulations. (Chapter notations below refer to U.S. Navy Regulations.)
 1. DON (Chapter 2). Discusses origin (acts of Congress, etc.), authority (powers given by Congress) and the organization found in the Navy Department, Shore Establishment, operating forces, and the Naval Reserves.
 2. Duties of the Commanding Officer (Chapter 8). Absolute responsibility for command. He/She can delegate authority, but not responsibility.
 3. Precedence, Authority, and Command (Chapter 10). Precedence of line officers, staff officers, warrant officers, midshipmen, etc. An officer, either of the line or staff corps, detailed to command by competent authority, has authority over all officers or other persons attached to the command, whatever their rank, and whether they are of the line or staff corps.
 4. Senior Officer Present (Chapter 9)
 - a. Definition: Senior line officer of the Navy on active duty, eligible for command at sea, present in locality and in command of any part of the DON in locality.
 - b. Authority: Shall assume command of all DON personnel when he/she deems necessary. Shall exercise authority in a manner consistent with full

operational command due a commander of a unified or specified command.

5. Honors and ceremonies (Chapter 12)
 - a. Colors: Ceremonial hoisting and lowering of the national ensign
 - b. Salutes: Long-established form of greeting and recognition
 - c. Side Honors: Arrival or departure of civil officials, foreign officers or as directed by the senior officer present
 - d. Funerals: Provides for ceremonies upon the death of a military member or civil official
6. Rights and responsibilities of naval personnel. Redress, direct communication with the commanding officer, leave and liberty, etc.

C. Briefly cover the background of the UCMJ.

1. History and background: Began with Phoenicians who had very strict laws pertaining to military personnel. Sea law differs from land law (civilian and military) due to inherent hazards of sea. In 1775, "Rules for the Regulation of the Navy of the United Colonies" was created by Congress. Each service has different rules. In 1950, Congress adopted the UCMJ (uniform to all services), to take effect 31 May 1951.
2. Purpose: Seeks to promote good order, high moral, and discipline
3. Scope: Applies to every aspect of military life
4. Application
5. Who is subject to UCMJ?
 - a. Active duty personnel
 - b. Reservists on active duty
 - c. Midshipmen of the Naval Academy
 - d. Retired personnel receiving benefits
 - e. Civilians under martial law. (NOTE: Civilians during times of peace are exempt from UCMJ.)
 - f. NROTC Midshipmen on Cruise/Summer Training.

NOTE: Individuals can be tried even after leaving the service for a crime committed while in the service. Also, can be tried

"Double Jeopardy" in conjunction with a civilian trial, though normally not done.

D. Review commanding officer's non-judicial punishment (NJP).

1. History: Greeks had NJP; field commanders could do almost whatever they wanted. British commanders could assign death penalty as NJP. Americans have always required court-martial. NJP started in 1951 with application of Article 15 of the UCMJ.
2. Who may impose NJP?
 - a. COs
 - b. OICs (officers-in-charge) or their commanders
3. Who may receive NJP? Any military member
4. Right to refuse
 - a. Ashore: A member may refuse NJP and elect court-martial.
 - b. At sea: No option to refuse NJP because it could undermine good order and discipline. Redress procedures still apply.
5. Nature of NJP
 - a. For minor offenses only, not a trial; hence, non-judicial.
 - b. Provides prompt judgment.
 - c. No lawyers needed or allowed (unless CO grants specific permission).
 - d. If severity of charges warrant, CO may discontinue NJP and order court martial.
6. Procedure for NJP
 - a. Pre-mast
 - (1) Details of offense determined by investigating officer (IO).
 - (2) The accused must be read and acknowledge his/her rights.
 - (3) The IO presents facts to the CO.
 - b. Mast
 - (1) Accused has the right to make a statement and present witnesses in defense.

- (2) CO weighs findings of IO, evidence, extenuating circumstances, etc.
- (3) CO determines guilt/innocence and amount/type of punishment.
- (4) Accused can appeal on grounds that the punishment was unjust or disproportional to the offence.

E. Summary, special, and general courts-martial

- 1. Differences among the three to include crimes tried, maximum punishment allowed, and personnel to which each applies
- 2. Jurisdiction of each
- 3. Concerning authority of each
- 4. Who may serve on each court-martial
- 5. Right of refusal
- 6. System of courts-martial review

F. The Secretary of Defense's "Standards of Conduct" for military personnel are outlined in the DOD Directive 5500.7 (series), "Standards of Conduct," and DOD Directive 5500.7R, "Joint Ethics Regulation," and are also addressed in The Bluejacket's Manual (page 111). The standards for all military personnel can be referred to as the "15 Never's" and are listed below:

Never use your position as a member of the Navy for private gain.

Never give preferential treatment to any person or organization.

Never do things that will reduce government efficiency or economy.

Never give up independence or lose your impartiality.

Never make decisions or take actions that will bypass the chain of command or go outside official channels.

Never do anything that will adversely affect the public's confidence in the U.S. Navy or U.S. government.

Never take part in any business or financial dealings that result in a conflict between your private interest and the public interest of the United States.

Never engage in any activity that might result in or reasonably be expected to create the appearance of a conflict of interest.

Never accept gifts from defense contractors or others who are trying to do business with the U.S. government.

Never use your official position to influence any person to provide any private benefit.

Never use your rank, title, position, or uniform for commercial purposes.

Never accept outside employment or take part in any activity that is incompatible with your duties or may bring discredit to the Navy.

Never take or use government property or services for other than officially approved purposes.

Never give gifts to your superiors or accept them from your subordinates.

Never conduct official business with persons whose participation in the transaction would be in violation of the law.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 7

Hours: 1.0

TITLE: Study Skills and Time Management

I. Learning Objectives

- A. The student will know the importance of and apply proper time management in a collegiate academic environment.
- B. The student will know how to use the ABC priority system to construct useful "to-do" lists.
- C. The student will apply methods of prioritizing in planning and controlling academic, extracurricular, and personal activities to reap the greatest benefits in all areas.

II. References and Texts

- A. Instructor references
 - 1. Academic Effectiveness: A Manual for Scholastic Success for Naval Reserve Officer Training Corps
 - 2. Goals Exercise (attached)
- B. Student text: Academic Effectiveness: A Manual for Scholastic Success for Naval Reserve Officer Training Corps

III. Instructional Aids

- A. Course Coordinator CD-ROM
- B. Computer/projection system
- C. Whiteboard/chalkboard
- D. Video: "Study Skills Instruction," 45 min
- E. VCR/Monitor

IV. Suggested Methods and Procedures

- A. This lesson is designed to assist freshmen in gaining overall control of their schedule, so they can effectively manage all of the rigorous demands placed on them by school, work, NROTC, etc. The lesson emphasizes laying a foundation for effective overall time management. This lesson is part lecture and part active class participation to help define the discussion topics that need more emphasis. Time management is not an exact science and each student will develop his or her own unique formula. The intent of this lesson is to assist students in learning the basic techniques of time management that they will be able to modify and use throughout their careers. This time management lesson, by nature, should be slanted toward midshipmen-related issues.

- B. Method options: Lecture/class discussion during first half of the class, followed by a student exercise.
 - C. Procedural and student activity options: Read Preface, Introduction for the Student, and Chapters 1, 2, and 6 of Academic Effectiveness: A Manual for Scholastic Success for Naval Reserve Officer Training Corps. Complete exercises 1-2 and 1-3. Complete goals exercise (attached at end of this lesson guide) during class.
- V. Presentation
- A. Importance of time management
 - 1. Control of your time equals control of your life
 - 2. False impressions of time management
 - B. Planning
 - 1. Dynamic planning. There are three levels of time management: semester/term, weekly, and daily. In order to make most effective use of time, it is important to take control of each level.
 - a. Obtain a pocket calendar. It must show days, weeks and months. Keep it with you at all times.
 - b. Make a semester schedule. It's important to see the "big picture" of all semester requirements.
 - (1) Use color codes to help separate academic requirements, holidays, exams, exercise, etc.
 - (2) First day of classes each semester. Utilize the syllabus/class schedule for each class. Write due dates for homework assignments, oral reports, projects and papers and the dates of quizzes, exams, midterms and finals in your pocket calendar.
 - (3) Your schedule must allow for flexibility, as course assignments, exam dates, etc., may change.
 - (4) Make copies of your schedule and include with class notebooks.
 - (5) Review semester schedule regularly and update immediately if something changes or is added/deleted.
 - c. Make a weekly schedule. (Prepare in advance.)
 - (1) Fill in all classes and labs. These are **inflexible** time periods dedicated to academics.

- (2) Block off time each morning for getting ready for the day. (Most students need about an hour.)
 - (3) Block off time for extra activities (athletics, clubs, etc.).
 - (4) Block off time for work (if applicable).
 - (5) Add up remaining time (each week has a total of 168 hours).
 - (6) Fill in study times. A good rule of thumb is two to three hours per class credit. On average, this equals 30-45 hours based upon a course load of 15 credits. This is adjustable once specific course requirements are determined. Keep in mind that many labs require additional time.
 - (7) The rest of the week is now available for sleep, meals, entertainment, etc.
- d. Make a daily schedule. Perhaps two of the most useful habits you can develop occur at the very beginning and at the very end of each day. This small time investment should yield a high return by saving you hours of wasted time trying to figure out what you should be doing. This method of organization will help you pinpoint any problem areas quickly and allow you an opportunity to adjust your schedule before a crisis develops.
- (1) End each night by taking 5-10 minutes to plan the next day. Use a 3 X 5 card to prepare a to-do list. Start by reviewing the weekly schedule to see what you originally had planned for the day. Check the semester schedule to see if you have any large exams or assignments due soon.
 - (2) At the start of the next day, quickly review your to-do list. Carry the list with you and refer to it throughout the day.
- e. Stick to your schedule! You have created an excellent tool to help you succeed, but you must use it for it to be effective.

2. Inherent difficulties

- a. Decisions and choices
- b. Giving up too soon
- c. Unforeseen/Uncontrollable events (crisis)

3. ABC system
 - a. Break down goals into manageable activities.
 - b. List activities in priority order.
 - c. Make high priority activities "A's," lower ones "B's," and still lower ones "C's."
 - d. Do "A's" first, not "C's."
4. Resolving study time obligations that conflict with a "to-do" list
 - a. Prioritize among study demands using the ABC formula.
 - b. Study classes you like least, first; and study classes you like best, last.
 - c. Allow some flexibility, but maintain priorities.
5. Time
 - a. Time is a finite resource -- only 168 hours a week are available.
 - b. Where to find "more." (Actually, there is no more time available -- it's just a matter of adjusting what you have by changing how you use it.)
 - (1) Class schedule
 - (2) Outside commitments
 - (3) Sleep habits
 - c. Efficiency is the key to getting the most out of your time.
6. Consider the following:
 - a. QUESTION: "What is the best use of my time right now?"
 - b. ANSWER: An "A" activity, or you are wasting your time.

GOALS EXERCISE

Background

Every human being has aspirations. Every human being has commitments. This exercise is aimed at helping you set realistic goals that are achievable and get a feeling for classifying decisions and establishing priorities. To achieve something worthwhile, follow the exercises outlined below. NOTE: Jumping to the submission without going through the exercises is a waste of time.

Exercises

1. Identify your activities for this coming week. Analyze them. Organize these activities into groups. Determine the time budgeted/allocated to each group of activities. Tabulate this information. Draw a "bubble diagram" -- one that helps you establish precedence and conveys the feeling you have with respect to activities and time. How much time are you spending in each of the major groups? What did you learn from this exercise?
2. Jot down your long and short term goals. Analyze them. Refine the language and order. Satisfied? Check with the time you budgeted. Repeat until you are satisfied. What did you learn from this exercise?
3. Draw a beach ball. Make each of your activities one leaf of the beach ball. Take one leaf and identify all the decisions you are likely to make in performing this activity. Satisfied? Organize the decisions in the following categories:
 - Those that should be answered through analysis.
 - Those that are not technical in character.
 - Those that require experience-based judgment.
 - Those that involve synthesis.

What did you learn from this exercise?

Submission

1. The bubble diagram and time inventory.
2. Goals as first stated and after modification.
3. The beach ball. Explode a leaf showing the activity and a summary of the decision types. Expand on one or two decisions in each category.

What did you learn from each of these exercises individually, as well as all of the exercises together? Include several insightful observations.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 8

HOURS: 1.0

TITLE: Shipboard Organization and the Military Duties of a Naval Officer

I. Learning Objectives

- A. The student will know shipboard command relationships and organizations for both operational and administrative environments as follows:
 - 1. The student will know the organization of shipboard battle, special operation, and peacetime routine watch teams (in port, at anchor, and underway), and the responsibilities, accountability, and duties of each watchstander.
 - 2. The student will know the shipboard administrative organization, including the primary duties of the commanding officer (CO), executive officer (XO), department heads (DH), and division officers (DO).
 - a. The student will know the various conditions of readiness.
 - b. The student will know the purpose of the watch, quarter, and station bill.
- B. The student will know the purpose and contents of the ship's deck log and the engineering log.
- C. The student will know the duties and authority of naval officers.

II. References and Texts

- A. Instructor references
 - 1. Naval Orientation, Chapters 4, 16
 - 2. The Naval Officer's Guide, Chapters 10, 11
 - 3. OPNAVINST 3120.32 (Series), "Standard Organization and Regulations Manual (SORM) of the U.S. Navy"
 - 4. The Bluejacket's Manual
- B. Student text: The Naval Officer's Guide, Chapters 10, 11

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Course Coordinator CD-ROM
- C. Computer/projection system

D. Video: "Aircraft Carrier"

E. VCR/Monitor

IV. Suggested Methods and Procedures: Lecture/Discussion

V. Presentation

A. Authority. U.S. Navy Regulations outlines the authority of all naval personnel. Upon commissioning, the officer is granted the authority and responsibility to perform his/her duties.

B. Watchstanding

1. Officer of the deck underway (OOD). The OOD takes charge of the safe and proper operation of the ship. The CO places special trust and confidence in this person. Duties and responsibilities include:

- a. Navigate the ship safely.
- b. Avoid danger and keep station by issuing the necessary helm and rudder orders through the conning officer.
- c. Make all required reports to the CO.
- d. Supervise all personnel on watch, ensuring all required deck log entries are made.
- e. Be aware of the status of the engineering plant and keep the engineering officer of the watch (EEOW) advised of power requirements.
- f. Carry out the routine of the ship.
- g. Supervise and conduct OJT for the junior officer of the deck (JOOD) and the junior officer of the watch (JOOW).

Deck: To have the deck means to supervise all functions and maneuvers of the ship.

2. Junior officer of the deck. The OOD usually delegates to the JOOD the "conn" (i.e., to direct the movement of the ship). When the conn or deck is shifted, it is announced in the pilot house. Examples:

- a. Relieved conn (LT Scott), "Attention in the pilot house. This is LT Scott. LT Peterson has the conn."
- b. Relieving conn (LT Peterson), "This is LT Peterson. I have the conn."
- c. Each member of the watch team acknowledges:

- (1) Helm, "helm aye, steering course 085, checking 087"
 - (2) Leehelm, "leehelm aye, all ahead 1/3 indicating 115 turns for 12 knots"
3. Combat systems watch officer (CICWO). The CICWO supervises the combat information center (CIC) and ensures that the OOD is kept advised of recommendations for maintaining station and safe navigation.
 4. Tactical action officer (TAO). This watch billet is assigned during Condition III wartime steaming or higher threat. The TAO is responsible for tactical employment of the ship's weapons systems and defense of the ship.
 5. Engineering officer of the watch (EOOW). This watch is in charge of the safe operation the ship's engineering plant.
 6. Command duty officer (CDO). When standing this duty, he/she is the direct representative of the CO. Larger ships may have a CDO underway, smaller ships only when in port. All persons, regardless of rank, are subordinate to the CDO.
 7. OOD in port. Supervises the quarterdeck, ensures security of the ship, and carries out the ship's routine.
- C. Review underway watch organization on Course Coordinator CD-ROM. Describe each duty and conduct question/answer period.
- D. Explain the need for standardized organization onboard Navy ships.
1. Minimize possibility of overlapping of responsibility.
 2. Minimize duplication of personnel/tasks.
- E. Explain why it is necessary to be uniform among ships. (Personnel transferred ship to ship will already know basic organization of each command structure.)
- F. Ship's organization
1. Administrative chain of command -- department heads report to CO through XO
 2. Operational chain of command -- department heads report directly to CO
 3. Battle organization. Conditions of readiness:
 - I General quarters -- maximum state of readiness; entire crew at battle stations
 - IIAS Variation of condition I to meet ASW threat

- IE Relaxed condition I to feed crew
- II Special watch for gunfire support ships during extended periods of shore bombardment
- III Wartime cruising -- 1/3 of crew on watch, armed to match anticipated threat
- IV Normal peacetime cruising -- generally simulate III for training; ensures effective ship and aircraft patrol
- V Peacetime watch in port -- enough personnel onboard to cover emergencies and get underway; no armament manned

G. Personnel organization

- 1. Commanding Officer (CO)
 - a. Absolute responsibility for the overall safety, well-being, and efficiency of his/her command including:
 - (1) Safe navigation
 - (2) Preparation of ship/unit for battle
 - (3) Direct ship to engage an enemy/carry out mission to the best of its ability
 - (4) Morale, welfare, and living conditions of crew
 - b. Delegation of authority, but not responsibility
 - c. Delegation of training and education to XO
 - d. Supervision of the conduct of all personnel (judicial, legislative, executive)
 - e. Must be a line officer aboard ship.
- 2. Executive Officer (XO). Second in command to the CO. The XO must be ready to assume command in the event CO is disabled.
 - a. Coordination of all departments
 - b. Morale, welfare, discipline
 - c. Assignment of personnel and records
 - d. Preparation of ship's bills and orders
 - e. Supervision of all education and training
 - f. Loading and berthing

- g. Ship's correspondence
- h. Approval of liberty and leave
- 3. Department Heads (DH)
 - a. Responsible for all aspects of department
 - b. Communication to XO/CO
 - c. Examples of departments
 - (1) Operations
 - (a) Prep of operational plans
 - (b) Prep of training schedules
 - (c) Visual & electronic search
 - (d) Intelligence
 - (e) Control of airborne aircraft
 - (f) CMS -- issue and control
 - (g) Operational evaluation
 - (h) Radio and visual communications
 - (i) Combat information
 - (j) Weather forecasting
 - (2) Navigation (not always a department)
 - (a) Navigation and piloting
 - (b) Care and maintenance of navigation equipment
 - (c) Maintenance of charts, pubs, records
 - (3) Weapons/Deck
 - (a) Operation, maintenance, and repair of armament/deck equipment
 - (b) Handling and storage of ammo
 - (c) Marine detachment
 - (d) Air department
 - (4) Engineering

- (a) Operation, maintenance of ship's machinery
 - (b) Damage and casualty control
 - (c) Repair of hull and machinery
 - (d) Power, lighting, and water ("hotel services")
- (5) Supply
 - (a) General supply
 - (b) Disbursing
 - (c) Operation of mess
 - (d) Ship's stores
- (6) Dental/Medical (Note: Approximately 500 people required to have medical officer/department onboard.)
 - (a) Treatment
 - (b) Oral hygiene, health, sanitation, first aid
- (7) Air
 - (a) Handling aircraft on deck/hangar
 - (b) Fuel use and stowage
- 4. Division Officer (DO)
 - a. Responsible to and acts as assistant to DH (example: DCA, 1st LT)
 - b. Carries out policies of command
 - c. Responsible for seeing that tasks assigned to the division are carried out in a timely manner
 - d. Inspects divisional spaces, equipment, personnel
 - e. Responsible for training of division members
- 5. Group supervisors
- 6. Leading Chief Petty Officer (LCPO)
- 7. Leading Petty Officer (LPO)
- 8. Work Center Supervisors (WCS)

9. Maintenance men
- H. Typical in-port watch organization
1. Command Duty Officer (CDO): Senior line officer on board; authorized to take ship to sea, if required (designated in writing)
 2. Quarterdeck: Primary watch station
 - a. OOD -- same as described previously; may be CPO/JO
 - b. Petty officer of the watch (POOW)-- OOD's primary assistant/armed for security
 - c. Messenger
 3. Engineering watches
 - a. Damage control central watch
 - b. Sounding and security patrol -- checks tanks (fuel, water, voids, bilges) and engineering spaces for security; reports to OOD once every hour
 - c. Watch maintained in each major space when plant is lighted off
 4. Weapons rover -- when nukes onboard/armed/30 minute reports directly to OOD
- I. Watch organization/Key watchstanders
1. General quarters -- all hands at battle stations
 2. Sea and anchor detail -- for piloting and/or low visibility (pilot/nav/OOD/lookouts)
 3. Anchoring detail -- OOD plus deck department
 4. Anchor watch -- JO on bridge/QM plotting bearings to determine whether dragging anchor
- J. Bills/Logs
1. Watch, quarter and station bill. Delineates personnel by name, rank, billet, battle station, watches for each condition of readiness, cleaning stations, abandon ship, rescue and assistance details, special sea details
 2. Deck log
 - a. Navigator is responsible for proper entries.
 - b. Includes every occurrence of significance to the ship and/or crew.

- c. Includes engine orders, courses, speeds, positions, weather, damage, accidents, changes in ship's personnel or passengers, records of meetings or courts, reports of inspections.
 - d. Primary chronological record of all watches.
 - e. Log can be used as legal evidence.
- 3. Engineering log. Daily record, by watches, of all aspects affecting the engineering department, including operation of the ship's propulsion and auxiliary machinery systems
- 4. Engineer's bell book. Chronological record of all orders to the engine room(s) affecting ship's speed
- K. Show transparency of time/bells for morning, forenoon, afternoon, evening, and night watches. (See chart in The Bluejacket's Manual.)

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 9

HOURS: 2.0

TITLE: Deck Seamanship/Shipboard Safety

I. Learning Objectives

- A. The student will know the general dangers associated with shipboard deck evolutions.
- B. The student will know the role of officers as safety observers during deck evolutions.
- C. The student will know terms and nomenclature of shipboard deck seamanship equipment and fittings and the fundamentals of their usage.
 - 1. The student will know the basic safety precautions associated with the following groups of shipboard equipment:
 - a. Ground tackle, anchoring, and mooring equipment and fixtures
 - b. Boat lifting and handling equipment
 - c. Weight handling equipment
 - d. Fiber and synthetic lines and wire ropes
 - e. Life lines, life rails, and safety chains
 - f. Working aloft, over the side, or in holds and voids
 - g. Hand-held and general-use power tools
 - 2. The student will know responsibilities and safety precautions relative to small boat operations.
- D. The student will comprehend the importance of "common sense" in identifying general deck safety hazards.

II. References and Texts

- A. Instructor references
 - 1. Seamanship: Fundamentals for the Deck Officer, Chapters 4, 6, 7 and Appendix C
 - 2. The Bluejacket's Manual, Chapter 19
- B. Student text: The Bluejacket's Manual, Chapter 19 (recommend using excerpts)

III. Instructional Aids

- A. Video: "Synthetic Line Snapback," 20 min
- B. VCR/Monitor
- C. Course Coordinator CD-ROM
- D. Computer/projection system

IV. Suggested Methods and Procedures

- A. This lesson is very important, as it lays a foundation for developing a successful safety attitude and learning "good" safety habits. This lesson should be presented by a staff member who has a working knowledge of and experience with shipboard/fleet hazards. "Sea stories" are very effective in illustrating points and are highly encouraged.
- B. Discussion of current "The Plank" articles from NAVSAFECEN's Surface Warfare magazine, if available.

V. Presentation

- A. Discuss the important role officers play in the safe execution of deck evolutions.
 - 1. Fundamental philosophy of deck seamanship. A ship is an *industrial environment*. It is a *dangerous* place to work, but it can be made safe by taking care, using common sense and not hurrying.
 - 2. Where do officers fit into the picture?
 - a. Most junior-enlisted sailors feel that they are "immune from danger". The senior personnel must ensure that they don't find out how wrong they are.
 - b. The safety officer must resist the temptation to get personally involved in the activities, perhaps wishing to speed things up or by demonstration rather than explanation. He/she must focus on the "big picture."
 - c. Allow the boatswains' mate to do his/her job. If he/she cannot, stop everything and replace the boatswains' mate, but the safety officer will not abandon post.
- B. Discuss personal protective gear. Because a ship is an industrial environment, a few specific safety items should always be worn:
 - 1. Footwear. Steel-toed boots, or "boondockers," are appreciated after that pry bar falls on a person's foot or a cargo boom sets a pallet down on a toe. "Plastic" shoes (e.g., Corfam), as well as CNT clothing, should be avoided

when underway. A fire will melt them and cause considerable anguish and bodily harm.

2. Hard hats. Whenever work is going on, such as topside work or underway replenishment, a hard hat should be worn. It won't protect against a falling truck, but it will keep a wrench from knocking a person out when it is dropped from above. White is the hard hat color worn by officers and other safety/supervisory personnel.
3. Hand and eye protection. Whenever power tools are in use, hand and eye protection should be worn. A chipping gun with pieces of paint flying out from it is obvious, but there are many other times where common sense should tell one to use hand and eye protection. For example, when letting go the anchor from the fo'c'sle, personnel assigned to the anchor detail will wear eye protection against pieces of rust that are pulled from the chain locker. When working with pressurized fluid systems, eye protection could prevent serious injury.
4. Hearing protection. A very common industrial injury is hearing loss. This is one of the most difficult to notice and protect against. Most people do not worry about loud noises for short periods of time and, when it is more expedient not to wear hearing protection, will not do so. Over the years, though, hearing loss will develop. Common sense: If an individual has any questions as to whether hearing protection is required in a given instance, it probably is. Hazardous noise area warning placards will be posted where applicable. Read and heed!
5. Loose clothing. Anytime work is being done around rotating machinery or any moving system, loose clothing becomes dangerous. Picture the seaman watching a winch drum turn, oblivious to the fact that his/her sleeve is unbuttoned and hanging loosely down. Should that sleeve get caught in the winch drum, the seaman will become a casualty. Ensure that loose ends are tucked in (i.e., pants into socks or boots) and watch for "Irish pennants" (loose straps, lines, etc.).
6. Flotation devices. Life jackets and other personal flotation devices should be worn when common sense dictates. When lowering a boat from a ship, the line handlers should be in life jackets...what happens if a sudden surge on the boat propels a line handler into the water? Or if when letting go of an anchor, a person on the fo'c'sle sights a yellow or red chain coming up from the chain locker, the safest thing to do might be to jump overboard...so the fo'c'sle personnel should be wearing life jackets when working the anchor. In any case, anytime there is even a slight risk that someone could end up in the water, life jackets should be worn. On the flight deck, or during combat conditions, where a kapok-type life preserver is too bulky, other means (e.g., CO2 inflatable preservers) are substituted.

- C. Discuss safety precautions associated with ground tackle, anchoring, and mooring. "Safety rules":
1. The number one safety rule in this field is: **Never stand in the bight of a line or cable.**
 2. Pre-briefing.
 - a. Ensure that the evolution is well-briefed. The best ships not only pre-brief, but also debrief, and they involve the whole team, not just the officers and chiefs.
 - b. Events rarely go wrong when everyone knows what they are doing and how to do it.
 3. Anchoring. With ground tackle and anchoring, a yellow "shot" of anchor chain is a warning, and a red "shot" is danger. Letting go of the anchor should be done slowly and with great control; but if the anchor is "free falling" out of control and one of these shots appears, get out of the way because the "bitter end" of that anchor chain will wipe out everything on the fo'c'sle when it pulls free.
 4. Mooring. When mooring, ensure that all line handlers are in safe zones when working tensioned lines. Keep an eye on the tattletales and on the general motion of the ship. Personnel on the bridge are more concerned about maneuvering and positioning the ship, and it is easy to lose the big picture regarding lines. Avoid a parted line by keeping the bridge informed as line tension increases and by watching what is happening around the lines.
 5. Towing. Towing is an immensely complicated process, and thoroughly briefing the plan of action is essential. If time permits, a few practice runs should be made. But in general, the same safety rules apply. Tow lines part more frequently than mooring lines, and care should be taken when working around them. Also, an ax should be located near the tow rig to cut away the line, if necessary.
- D. Discuss small boat handling safety precautions and methods. Boats are brought on or lowered by either davits, booms, or cranes, and a few common safety tips apply to all cases:
1. Winch handles. When using a davit, the manual (gravity) winch handle should be, like on a sailboat, either in the hand or in the holder. Never leave an unattended winch handle in the winch.... if it free falls, the winch handle will rotate very quickly on its own.
 2. Monkey lines. Monkey lines are on the span wire to be used. A person should place about three-quarters of his/her weight on the lines so that if the boat should fall out from under the individual, he/she will not fall with the boat.

3. Hard hats and helmets. Wear head protection when a boat is being lowered. Note that a helmet firmly attached to the head will act like a parachute should an individual hit the water. This could cause irreparable damage to the neck, so a person should either have a break-away chin strap or hold the strap in his/her teeth rather than fastening it.
 4. Stand outboard when a boat is being lowered. It is much better to be between the boat and the sea than between the boat and the ship.
 5. Reduced seating capacity. This is mandated at any time a boat is being raised or lowered. Generally, this is based on the number of monkey lines leading off the span wire; however, every individual boat has a specified maximum number of personnel that can be raised or lowered with it.
 6. Weather. Discuss safety hazards of small boats in adverse weather.
- E. Discuss safety precautions for cargo handling and UNREP evolutions.
1. Safety is an issue any time weight is being handled, especially during cargo on-loads or off-loads and during UNREPs. The following general precautions must be followed:
 - a. Pre-briefing. As always, the best defense against a mishap is to have trained people well-briefed in what they are going to do. When the rig captain has to try to figure out a load plan rather than work the rig, problems could occur. Thoroughly brief each evolution.
 - b. Training. Line handlers must be properly trained. One common injury occurs when line handlers grip their line too close to the fitting. If the load surges, they won't have time to pull their hands away before being dragged through the fitting. Keep hands at least 18 inches from a bit, pad-eye, or snatch block.
 - c. Stand clear of the load. **Never get between a load and the ship.** It is amazing how many people think they can get on one side of a five-ton load and push it into position. At sea, an errant wave or surge can cause the load to move. Do not allow someone to get trapped between the load and a bulkhead when this happens....use the tending lines.
 2. **Common sense is the most important factor.** All of these precautions make sense if a person sits back and takes a moment to look at them. Do not pass a station and ignore a violation of common sense.

- F. Define *line* and *rope* and discuss safety precautions when working with lines and rope.
1. General precautions
 - a. Gloves
 - (1) When working with wire rope, a person must wear gloves. There are many "fishhooks" (fragments of wire) that can cut a hand, and the grease that covers most rope is not good for an open cut.
 - (2) When handling line, however, a person should generally not wear gloves. (Prevents getting caught in lay of the line.)
 - b. Parting. Wire ropes part just like lines do, and care should be taken not to rush evolutions that involve wire rope. Although it doesn't tend to snap back like synthetic line, a parting rope or line is dangerous.
 - c. Deterioration of line. The biggest danger with natural fiber lines is rotting. That is the advantage of synthetic fiber lines, even though they "snap back" when parted. Make sure the line used is safe: If it is natural fiber, it should be no older than 5 years; and if it is a synthetic line, be careful that it is not exposed to petroleum products which may cause it to deteriorate.
 2. Synthetic line snapback
 - a. Synthetic lines, when parted, react like a rubber band. Always keep this in mind when working with synthetic line. Stand in safe zones.
 - b. Pay attention to "tattle tales." A tattle tale line is a piece of smaller line that is attached to a synthetic line at two carefully measured points so that it droops down. As the synthetic line stretches, the droop in the tattletale will get less and less. When the tattletale has become taut and is lying parallel to the synthetic line, you will know that the line is in danger of parting.
 3. Note again that all these items are *common sense* precautions to which anyone should be able to notice and react.
 4. Commands to line handlers. Discuss some of the commands typically used during a line handling evolution such as: "Hold, stand by your line, slack the line, put turns on the capstan, stand clear the line, etc."

- G. Discuss the importance of life lines, life rails, and safety chains. In all likelihood, one of the spaces to which an officer will be assigned to maintain will have life lines or safety chains. The division officer must ensure that spaces are safe and that safety gear is rigged where needed.
1. Life lines. Flexible lines rigged between stanchions to prevent falls. **(NOTE: These are not to lean on.)** Today, most are made of kevlar. They are fastened to the stanchions by "sister-hooks" which are secure when rigged, but relatively easy to remove.
 2. Life rails. Permanent rails set up to prevent falls.
 3. In both cases, the division officer must ensure:
 - a. That coverage is adequate (i.e., that there is not a five-foot gap between two life rails with a 10 foot fall between them); and
 - b. That life rails and life lines are in good condition and are not rusted or corroded at the attachment points.
 4. Safety chains.
 - a. These prevent people from falling where a permanent fixture, such as a life rail, is not possible. For example, they are rigged around an open hatch in a deck.
 - b. Safety chains should be rigged around open trunks and hatches, and where there is a gap between life rails or life lines. Always be alert for violations, because the biggest danger lies in the darkness. An unsuspecting person transiting throughout the ship may not know a hatch is open until it is too late.
- H. Discuss safety procedures for working aloft, over the side, or in holds.
1. An officer of the deck (in port) will be approached with requests from sailors to go either aloft, perhaps to repair an antenna, or to go over the side, perhaps to work on the anchor.
 2. There are a few fundamental safety items to consider before signing check-off lists:
 - a. Tended harness. Anyone working aloft is required to have a safety harness rigged and tended.
 - b. Knowledgeable supervisor. Make sure the supervisor intends to remain on scene and is qualified to oversee the evolution. Ask him/her to explain key things to watch for, such as hand-tending the harness and ensuring the word is passed. Also, when people

are working aloft, ensure that radars and radios have been de-energized and have the quarterdeck pass the word at regular intervals.

3. Similar precautions should be taken when working over the side; but a life jacket, one that is specially rigged to work with a safety harness, must be worn. Also ensure that a competent supervisor is assigned.
4. Generally, working aloft or over the side is discouraged while underway. Permission to do so is granted only by the CO.
5. Working in holds/closed compartments
 - a. Working in holds does not require the word to be passed or life jackets to be worn; but anytime cargo is being moved, a safety officer must be on scene. Ensure that all heads are looking up at the load while it is being lowered into the hold, and that no one is in danger of being pinned by the load.
 - b. Most importantly, people should avoid walking under a load. It doesn't happen often, but a winch brake may fail and the load may fall. The only thing more dangerous is material falling off a cargo load.
 - c. In closed compartments (e.g., tanks/voids, etc.), a safety line must be used and the space certified "gas free" by the GFE. No naked lights allowed. Approval for entry is granted by the GFE and the department head.

I. Conclusion

1. What do all of these types of evolutions have in common?
 - a. **Common sense** is the name of the game. If it looks wrong, it probably is.
 - b. **Thorough training and briefing** will ensure safety and thorough, proper execution.
 - c. Doing the job correctly usually means doing it slowly. One of the most difficult, but necessary, jobs of a deck safety officer is telling an impatient CO or department head that it cannot be done any faster.
2. The number of accidents in the fleet today is surprisingly low considering the type of work done. It is up to the officer to keep it that way.

**NAVAL RESERVE OFFICER TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 10

HOURS: 1.0

Title: Damage Control Overview

I. Learning Objectives

- A. The student will know the requirements for looking ahead in shipboard damage control training and preparedness.
- B. The student will know the typical shipboard damage control organization and the responsibilities of key personnel assigned.
- C. The student will know how shipboard watertight integrity is obtained through installed features to increase material conditions of readiness.
- D. The student will know the various conditions of readiness.
- E. The student will know the importance of preventive damage control.

II. References and Texts

A. Instructor references

- 1. Introduction to Naval Engineering, Chapter 26
- 2. Shipboard Damage Control, Chapter 7, 9 and 10
- 3. The Bluejacket's Manual, Chapter 18
- 4. Principles of Naval Engineering, Chapter 4
- 5. U.S. Navy Fact File website at:
www.chinfo.navy.mil/navpalib/factfile/ffiletop.html

B. Student texts

- 1. Principles of Naval Engineering, Chapter 4
- 2. The Bluejacket's Manual, Chapter 18

III. Instructional Aids

- A. Computer/projection system and PowerPoint slides or overhead projector and locally-prepared transparencies
- B. Video: "Trial by Fire," 25748, 26 min
- C. VCR/Monitor

- D. Damage control slides (See Course Coordinator CD and/or U.S. Fact File website.)

IV. Suggested Methods and Procedures

- A. Method option: Lecture
- B. Procedural and student activity options: Study assignments

V. Presentation

- A. Ships at sea are isolated from shore help and usually help from other ships; therefore, the crew must be capable of handling any damage the ship may encounter. Ninety percent of the damage control needed to save a ship takes place before the damage occurs. Damage control is an all-hands evolution. Everyone on a ship must be general damage control qualified and train regularly.
- B. Damage control is a 3-phase activity:
 - 1. Prevent the damage
 - 2. Minimize the effects of damage
 - 3. Restore the ship to an effective fighting unit
- C. Effective damage control requires:
 - 1. Organization
 - 2. Education
 - 3. Training
 - 4. Maintenance of equipment
- D. Damage Control Organization

POSITION/CHAIN OF COMMAND

LOCATION

CO	CIC/Bridge
CHENG (DC Officer)	Main Control
DC Assistant	DC Central
Locker Officers/Leaders	Repair Locker
Scene Leaders	Scene of damage
Hose teams	Scene of damage

- E. The larger the ship the greater the number of repair parties. Repair parties found on a DDG/FFG.

REPAIR PARTY

LOCATION

Repair 2
Repair 5
Repair 3

Forward repair
Propulsion repair
After repair

- F. Compartmentation: Navy ships are extensively compartmented. This compartmentation acts as a barrier to fires and flooding and prevents further damage. Navy ships are built to withstand the solid flooding of a certain number of compartments without sinking. This passive defense is surrendered if watertight integrity is not maintained through training and repair. Watertight doors and hatches must be maintained and closed properly.
- G. Material condition of readiness: Explains which doors, hatches and fittings are permitted open (the ship's level of watertight integrity).
1. X-ray (X): Provides the least protection and is set when there is no danger of attack or damage. All fittings marked with a black "X" shall be closed.
 2. Yoke (Y): Set and maintained at sea and in port during wartime or outside normal working hours. All fittings marked with a black "Y" shall be closed in addition to all "X" fittings.
 3. Zebra (Z): Set during general quarters; provides the maximum protection for the ship and personnel in battle and emergency situations. All fittings marked with a red "Z" shall be closed, in addition to those marked with an "X" and "Y."
- H. Special classifications
1. William (W): Sea suction valves and fittings that serve vital systems' cooling water and other fittings and equipment necessary for fire protection and mobility. They are closed only to prevent further damage.
 2. Circle X and Circle Y: Letter within a black circle. Signifies that may be opened without special permission, but must be secured immediately after use.
 3. Circle Z: Letter within a red circle. May be opened with permission of the CO during general quarters for the comfort of the crew. Guarded when opened for immediate closure, if necessary.
 4. Circle W: Letter within a black circle. Signifies ventilation fittings that are normally open and operating, but may have to be closed to prevent contamination from CBR attack or smoke. When closed, the habitability of the ship

decreases rapidly. Should be closed for only very short periods.

- 5. Dog Z: Fittings marked with a red "Z" inside a black "D" are closed to darken the ship. (Accesses to weather decks not equipped with light traps or door switches; porthole covers, etc.)

- I. It is the responsibility of all hands to maintain the material condition in effect. If it is necessary to break the condition, permission must be obtained (from OOD or DCC). A DC closure log is maintained in DCC at all times.

**NAVAL RESERVE OFFICER TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 11

HOURS: 1.0

Title: Damage Control Systems and Equipment

I. Learning Objectives

- A. The student will know the procedures, objectives, and priorities in combating the progressive deterioration from fire and underwater hull damage.
- B. The student will know the four classes of fire and the fire fighting agents, equipment, and procedures to extinguish each class.
- C. The student will know the use of equipment, materials, and procedures for countering progressive flooding and structural deterioration and demonstrate use while on summer cruise.
- D. The student will know the principles of operation of the fire main system.
- E. The student will know the procedures for donning, doffing, and proper operation of an Oxygen Breathing Apparatus (OBA), Self-Contained Breathing Apparatus (SCBA), Emergency Egress Breathing Device (EEBD), Supplementary Emergency Escape Device (SEED), and Standard Navy Gas Mask MCU-2P and demonstrate their use while on summer cruise.

II. References and Texts

A. Instructor references

- 1. Introduction to Naval Engineering, Chapter 26
- 2. Principles of Naval Engineering, Chapter 4
- 3. Shipboard Damage Control, Chapter 7
- 4. The Bluejacket's Manual

B. Student texts

- 1. Principles of Naval Engineering, Chapter 4
- 2. The Bluejacket's Manual

III. Instructional Aids

- A. Computer/projection system and PowerPoint slides or overhead projector and locally-prepared transparencies

- B. Damage control equipment, if available
 - C. Videos:
 - 1. "Beating the Odds: The *USS Samuel B. Roberts* Fights for Life," 18 min
 - 2. "Fire on the Flight Deck," 26 min
 - D. VCR/Monitor
 - E. Damage control slides (See Course Coordinator CD and/or U.S. Fact File website.)
- IV. Suggested methods and procedures: Have a Surface Warfare Officer present all or part of the damage control lecture. If available, take students to local Reserve Firefighting Unit, Base Firefighting Unit, or local civilian firefighting station for actual hands-on damage control training. This could include practice with a live firehose, instruction in portable extinguishing agents, familiarization with FFE or other PPE, or even live firefighting experience.
- V. Presentation
- A. Review items listed in Principles of Naval Engineering, Chapter 4, which the repair party should report to the DCA. Discuss the immediate local measures the repair party should perform.
 - B. Discuss the elements of the fire tetrahedron:
 - 1. Fuel
 - 2. Heat
 - 3. Oxygen
 - 4. Free radicals (Chemical reaction)
 - C. Describe the general characteristics of the four classes of fire:
 - 1. Class A: Wood, rubbish, paper
 - 2. Class B: Fuel, oil
 - 3. Class C: Electrical
 - 4. Class D: Metals, i.e., magnesium (any non A, B, C fire)
 - D. Discuss the firemain system.
 - 1. Receives water that is pumped from the sea
 - 2. Types of firemain systems:

- a. Single main -- small ships
 - b. Horizontal loop
 - c. Vertical loop
 - d. Composite versions
- 3. Primary purpose in fire fighting
- 4. Uses other than fire fighting, i.e., flushing, auxiliary machinery cooling, water washdown
- E. Discuss the fire station and its associated equipment.
 - 1. Fireplug
 - 2. Quick cleaning strainer
 - 3. All-purpose nozzle
 - 4. Vari-nozzle
 - 5. Hoses
- F. Describe the extinguishing agent for each type of fire and cover in detail the types of equipment used.
 - 1. Class A: Use of water
 - a. Firemain system
 - b. Sprinkler systems
 - 2. Class B: Use of foam, PKP, Halon, steam or fog
 - a. Aqueous film-forming foam (AFFF)
 - b. Potassium bicarbonate (PKP)
 - c. Twin agent extinguishing systems (AFFF/PKP)
 - d. Halon 1301 system
 - 3. Class C: Use of CO₂
 - a. Portable CO₂ extinguishers
 - b. CO₂ hose reel systems
 - c. CO₂ flooding systems
 - 4. Class D: Use of solid stream, fog or jettison

- G. Discuss the significance of flooding boundaries and systematic dewatering of flooded compartments.
 - 1. Discuss the following:
 - a. Progressive flooding
 - b. Flooding boundaries
 - c. Flooding may occur at locations far removed from the actual point of severe damage (e.g., from a torpedo hit), due to warping of structural members. So the entire ship needs to be investigated after suffering damage.
 - 2. Discuss some factors that should guide the priority of dewatering flooded compartments.
 - a. Effective allocation of resources. (Do not work on compartments where the damage is too severe to allow containment.)
 - b. Stability
 - c. Flooding effect diagram
- H. Discuss the various causes of flooding, the need to control it, and methods of water removal including:
 - 1. Causes of flooding
 - 2. P-250 pump
 - 3. Electric submersible pump
 - 4. Eductors
- I. Discuss the repair of structural damage including:
 - 1. Shoring
 - 2. Patching
- J. Discuss the Oxygen Breathing Apparatus (OBA), Self-Contained Breathing Apparatus (SCBA), Emergency Egress Breathing Device (EEBD), Supplementary Emergency Escape Device (SEED), and Standard Navy Gas Mask MCU-2P. If possible, try to acquire an example of each from a local Naval Station, Reserve Station, or other local fire department.
 - 1. Procedure for donning and operating each apparatus
 - 2. Capabilities of each apparatus

3. Circumstances under which each apparatus should be worn
- K. Discuss the safety precautions to be observed during damage control operations. Review dangerous situations to be aware of and avoid, when possible.
1. Electric shock hazard if water is used on Class C fire
 2. Exploding ordnance or fuels during fires
 3. Splattering hot metal associated with the Class D fire
 4. Being overcome by CO₂
 5. Being overcome by smoke during a fire
 6. Heat stress conditions
 7. Other

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 12

HOURS: 2.0

TITLE: Surface Warfare Community

I. Learning Objectives

- A. The student will know the contribution of the surface forces to the overall mission of the Navy.
- B. The student will know the types of training received in Surface Warfare Officer School (SWOS) and special occupational schools.
- C. The student will know the types of job assignments available for junior officers in the surface Navy.
- D. The student will know what is expected of a junior officer aboard a ship.
- E. The student will know the surface warfare officer career path and opportunities, including the requirement for joint duty.
- F. The student will know the designations and terms used to identify Navy ships.
- G. The student will know the ships included in the warship category.
- H. The student will know the characteristics, capabilities, and missions of various types of naval ships.
- I. The student will know the purpose and use of underway replenishment in the Navy.

II. References and Texts

A. Instructor references

- 1. The Naval Officer's Guide, Chapters 10-11
- 2. The Bluejacket's Manual, Chapters 12-14
- 3. The Division Officer's Guide
- 4. Jane's Fighting Ships
- 5. U.S. Navy Fact File website at:
www.chinfo.navy.mil/navpalib/factfile/ffiletop.html
- 6. OPNAVINST 3120.32 (Series), "Standard Organization and Regulations Manual of the U.S. Navy"
- 7. OPNAVINST 3111.14 (Series), "Homeports and Permanent Duty Stations; Establishment, Disestablishment and Modification of Activities of the Operating Forces of the Navy"

- B. Student texts
 - 1. The Naval Officer's Guide, Chapters 10-11
 - 2. The Bluejacket's Manual, Chapters 12-14
- C. Student reference: Jane's Fighting Ships

III. Instructional Aids

- A. Videos:
 - 1. "Sea Warriors," 12 min
 - 2. "Warship," 30 min
- B. VCR/Monitor
- C. Slides of U.S. Navy ships (See Course Coordinator CD and/or U.S. Fact File website.)
- D. Course Coordinator CD-ROM
- E. Computer/projection system

IV. Suggested Methods and Procedures

- A. Staff surface warfare officer should give the presentation, if possible.
- B. Due to time constraints, the slide presentation should include only the ships that are being discussed in the lecture. Students should read the assignment before class in order to identify slides.
- C. Use handouts to ease/clarify class notes and lectures.
- D. Students may be used to present part of the lecture, such as short briefs on the various warship classes.

V. Presentation

- A. Introduction
- B. Missions of the surface Navy
 - 1. Strike warfare (power projection)
 - a. Carrier assets. The carrier air wing is the main tactical striking force of the Navy. An important mission of surface warfare is to support and protect the carrier group. The air wing of the carrier is one of the most effective weapons in the Navy for AAW, ASUW, and allows the Navy to strike targets many miles away from the CVBG.

- b. Tomahawk. Tomahawk cruise missiles give surface ships the ability to strike shore and inland targets. The Tomahawk flies a predetermined path to its target. It is capable of flying over 1,200 nautical miles and striking its target with a variety of munitions weighing up to 1,000 pounds.
2. Antisubmarine warfare (ASW). The U.S. Navy is most vulnerable to the threat from submarines. The submarine force is also the strongest arm of the former Soviet Navy.
- a. Primary players. The dedicated ASW players are destroyers and frigates. Cruisers also have ASW capabilities, but their AAW capability is usually more important. The use of all battle group assets, including LAMPS and S-3Bs, is critical to successful ASW defense.
 - b. Supporting assets. Critical ASW support is provided to the surface fleet by other non-organic assets. P-3s, SSNs, SOSUS, and naval intelligence all provide information and unique capabilities that augment the effectiveness of the surface ship.
 - c. Detection vs. the kill. The hardest part of ASW is detection. Once a submarine is found, destruction of it can be accomplished by a variety of methods.
 - d. Weapons. Antisubmarine weapons include ship and aircraft-launched torpedoes.
3. Anti-air warfare (AAW). With the advent of high-performance attack aircraft, anti-ship missiles, and 300-mile range cruise missiles, AAW is an important part of modern warfare at sea. As the British experienced in the Falklands, a navy needs to be able to control the air in order to successfully conduct operations.
- a. Layered defenses. The AAW concept relies on a layered defense. The outer layer consists of *F-14 Tomcats* and *F-18 Hornets* from the carrier stationed hundreds of miles from the group. These aircraft are directed to contacts detected by orbiting E-2C *Hawkeyes*. The next layer is comprised of long-range, surface-to-air missiles fired by cruisers and destroyers. The final layer consists of shorter-range missiles and guns, followed by point defenses, such as the close-in weapons system (CIWS).
 - b. Weapons. AAW weapons begin with Phoenix, Sparrow, Sidewinder, and AMRAAM missiles carried by the combat air patrol (CAP). Next are long-range "Standard" missiles, such as extended- and medium-range SM-1s and SM-2s. These missiles are capable of intercepting targets at a range of nearly 100 miles. Shorter-range variants of these weapons are good out to 25 miles. Inside 10 miles, RAM (Rolling Airframe

Missile) and Sea Sparrow missiles are used to engage targets, and at extremely close, "do-or-die" ranges, CIWS guns are utilized. Additionally, MK45 5"/54 and the OTO/Melara 76mm gun mount can engage air targets with limited effectiveness.

4. Anti-surface warfare (ASUW). ASUW and AAW are closely related in today's naval battle. Missiles are the most common and effective anti-ship weapons. Also included in this area are interdiction operations -- the interception of drugs and other contraband on the high seas.
 - a. Weapons. Anti-ship weapons include missiles, guns, and aircraft. Carrier-based aircraft can attack surface forces at greater ranges than missiles. Tomahawk cruise missiles have a range of over 250 miles, SM-2 Standard missiles can target Over-The-Horizon ships and have become our primary ship-to-ship asset, Harpoon cruise missiles have a range of over 80 miles, and Penguin missiles have a 25+ mile range. Additionally, Penguin missiles can be launched from LAMPS MKIII helicopters. 5"/54 guns have an effective range of 15 miles.
 - b. Range/Detection problem. With the range of the modern missile systems, a target can be attacked beyond the detection range of shipboard radar systems. Helicopters, E-2Cs and other assets, such as ESM and satellites, are used for over-the-horizon targeting (OTH). Tomahawk and Harpoon missiles have the ability to conduct search patterns for targets at extended ranges.
 - c. Maritime Interdiction Operations (MIO). One of the oldest missions of the surface warrior is interdiction (or "blockading") operations. This involves the searching of ship's cargo for material outlawed by the U.S. or restricted by the UN.
5. Amphibious warfare (power projection). Another role of the surface Navy is to transport, deploy, and support Marines.
 - a. Transportation. The Navy has several classes of ships designed specifically to transport Marines, their material, and supporting groups, such as aircraft and landing craft.
 - b. Deployment. The Navy also possesses the capability to put Marines ashore using various types of landing vehicles, such as helicopters, hovercraft, amphibious tanks, and conventional landing craft.
6. Naval gunfire support. Once ashore, the Navy needs to continue supporting the Marines. Shore bombardment is naval gunfire that provides the Marines ashore with artillery support. This capacity is significantly reduced

now that the battleships have been decommissioned. The most common naval gun today is the 5"/54.

7. Mine warfare. This field is dramatically underemphasized. Mines have become an inexpensive sea control weapon capable of disabling large ships. The Navy has greatly expanded its anti-mine capabilities to counter this illusive weapon.
8. Logistic support. Includes oilers, supply ships, and repair ships.

C. Fleet organization

1. Task force/Task group. Task forces are large collections of ships under one command that have the capability to perform any of the above missions. A task group is a smaller part of the force, focused around one of the above missions with limited capability in the others.
2. Carrier battle group (CVBG)
 - a. Mission. To support the carrier air wing.
 - b. Composition. It normally consists of an aircraft carrier, cruisers for AAW, destroyers for ASW and ASUW, frigates, and assorted replenishment ships.
3. Surface action group (SAG)
 - a. Mission. The SAG is designed to engage enemy surface ships and to perform interdiction operations when deployed in certain locations.
 - b. Composition. Normally consists of a cruiser and several destroyers and/or frigates.
4. Amphibious task force/Amphibious Readiness Groups/Expeditionary Strike Groups (ATF/ARGs/ESGs)
 - a. Mission. Commonly called "gator" forces, the ARG/ESG transports ground forces and puts them ashore. Gator forces have also been known to evacuate U.S. nationals from hostile areas.
 - b. They consist of various types of amphibs, with destroyers and frigates protecting them from air and subsurface threats.

D. Ship types

1. Aircraft carriers (CV or CVN) (show slides)
 - a. Mission. The mission of CVs is to support the strike aircraft.
 - b. *Nimitz*-class CVN -- Very large ships, 1,000+ ft long and displacing over 100,000 tons. Nuclear powered

and able to sustain speeds in excess of 30 kts, they can support over 90 aircraft. With the air group on board, they have a crew of over 6,000. Organic weapons are limited to CIWS and Sea Sparrow for point defense only.

- c. *Kitty Hawk*-class CV - One ship: *Kitty Hawk*. This carrier is a conventionally powered ship of a similar design to the *Nimitz* class. She is over 1,000 ft long, displaces 80,000 tons, and is capable of speeds over 30 kts. Air wing and weapons are similar to the *Nimitz*.
- d. *Enterprise* CVN -- One ship. The first nuclear-powered CV; similar to the previous classes in design; commissioned in 1961. Recently completed a major overhaul.
- e. *John F. Kennedy* CV - One ship. Conventional-powered; similar in characteristics and capabilities as the *Kitty Hawk* Class.

2. Cruisers (CG) (show slides)

- a. Mission. Cruisers have two important missions: AAW and battle space control. They also possess ASW and ASUW capability, but focus on AAW.
- b. *Ticonderoga*/improved *Ticonderoga* CG -- These ships are similar in size and machinery to the *Spruance*-class destroyers. They have the AEGIS combat control system, combined with the SPY-1 phased-array radar. These ships have full AAW capability with two twin launchers for Standard missiles or two 61 cell vertical launch systems (VLS); ASUW with 8 Harpoon missiles, two 5"/54 guns, and Tomahawk in the VLS ships; and ASW capability with ASROC, torpedoes, and LAMPS MKIII systems. Overall, these are our most capable surface ships.

3. Destroyers (DDG) (show slides)

- a. Mission. Destroyers range from general purpose ships to hulls specializing in AAW and ASW. Destroyers are commonly used as screens for most task groups.
- b. *Arleigh Burke*-class DDG -- This newest class of destroyer is primarily designed for AAW. It has a version of the AEGIS combat system, although it lacks the AAW command facilities of the *Ticonderogas*. They are 466 ft long, are capable of 30+ kts, and are powered by four gas turbines. Primary weapons include Standard and Tomahawk. Harpoon missiles, torpedoes, and a 5"/54 gun and 2 CIWS mounts complete the weapons complement. These ships also have the SQQ-89 ASW system which integrates the LAMPS MKIII, active sonar and passive towed-array sonar with the

ships' ASW weapons assets, although they do not have helicopter support facilities.

4. Frigates (FFG) (show slides)

- a. Mission. The mission of frigates is that of escort duty. Originally, they were intended as escorts for the slower forces, such as amphibious groups and auxiliary forces. However, with the smaller size of today's Navy, they have been pressed into general service for many uses.
- b. *Oliver Hazard Perry*-class FFG -- General purpose ships, with Standard and Harpoon missiles, a 76mm gun, CIWS, torpedoes, and 2 SH-60B LAMPS MKIII helicopters included with a modified SQQ-89 ASW system. Their capability is limited due to cost restraints during construction. Most of these limitations became evident during the *Stark* and *Roberts* incidents. They are being used to screen regular task forces due to shrinking of the fleet. They are 450 ft long, have a crew of 200, and are capable of 29+ kts on their 2 gas turbines.

5. Patrol combatants (show slides)

- a. Mission. Patrol combatants are small vessels used for shore defense and customs operations.
- b. *Cyclone* class PC. Diesel-powered patrol craft used primarily as SEAL team delivery platforms. Also used for drug interdiction operations.

6. Amphibious ships (show slides)

- a. Mission. The mission of amphibious forces is to transport Marines and their supplies. Included in this is the ability to put the Marines ashore and support their assault.
- b. LCC/AGF -- These are command ships for geographic fleets. They have extensive command, control, communication, computer, intelligence and information (C⁴I²) facilities, and are currently being utilized as fleet flagships.
- c. LHD-*Wasp* class -- Ships of this class are roughly the same size as a WWII CV. They carry and support *Harriers*, helicopters, and various landing craft in their dock. They can house over 2,000 troops and have advanced medical facilities. Weapons are for point defense only.
- d. LHA-*Tarawa* class -- Similar to LHDs, but cannot support a LCAC in their dock. They can carry 1,700 troops and can provide their own fire support with

their three 5"/54 guns. They also have Sea Sparrow and CIWS.

- e. LPD -- These ships have a similar purpose to the other helicopter carriers, but do not have a flush deck or maintenance facilities, and they have a small well deck.
- f. LSD -- These ships are used primarily to transport and service various types of landing craft. They can receive troops via helicopter and have internal space for about 500 troops.
- g. LCAC, LCU, et al. -- Hovercraft, amphibious tractors (AAV7) and other smaller landing craft are used to put Marines ashore.

7. Littoral Warfare ships.

- a. Mission. The new breed of smaller, faster more versatile, shallower draft vessels will be designed to conduct a myriad of "brown water" missions ranging from SEAL ops to maritime reconnaissance to MIO/counter-drug ops.
- b. LCS- *Freedom* class- First keel laid summer of 2005...expecting 60 in class once final design and implementation have been finalized.

8. Auxiliary ships (show slides)

- a. Mission. Various kinds of auxiliary ships exist to perform a wide variety of roles. These range from repair ships to oilers to ships used in supplying the fleet while underway in a combat zone.
- b. Submarine tenders (AS)
- c. Fast combat support ships (AOE)
- d. Combat stores ships (AFS)
- e. Replenishment oilers (AOR & T-AOR)
- f. Oilers (AO)
- g. Ammunition ships (AE)
- h. Salvage ships (ARS)

E. Discuss ship identification

- 1. The initial letter of the ship's identification indicates the ship's mission:
 - a. C -- Carrier

- b. V -- Fixed Wing Carrier
- c. C -- Cruiser
- d. D -- Destroyer
- e. F -- Frigate
- f. G -- Guided Missile
- g. S -- Submarine
- h. P -- Patrol combatant
- i. L -- Amphibious assault
- j. A -- Auxiliary
- k. M -- Mine warfare

2. Example for discussion: *USS Chancellorsville* (CG62)

- a. USS - United States' Ship
- b. *Chancellorsville* - Ship's name
- c. CG - Indicates guided-missile cruiser
- d. 62 - Hull number

- F. Ship size/displacement. Given in terms of feet and tons of water displaced.
- G. Armament. Describes the offensive weapons a ship carries.
- H. Armor. Protective steel installed along the sides of the ship, on decks and superstructures, and on some gun mounts and turrets.
- I. Ship speed. Stated in knots. A knot is one nautical mile per hour. One nautical mile is 2,025 yards, but is commonly rounded to 2,000 yards. 20 knots = 20 nautical miles/hour = 23 land miles/hr.
- J. Ship categories. There are four general ship categories: combatant ships, auxiliary ships, combatant craft, and support craft.

1. Combatants

- a. Warship. Built to attack an enemy with gunfire, missiles, or other weapons
 - (1) Aircraft carriers (CV), or (CVN)
 - (2) Surface combatants
 - (a) Cruisers (CG)

- (b) Destroyers (DDG)
 - (c) Frigates (FFG)
 - (d) Patrol Craft (PC)
 - (e) Littoral Combat Ships (LCS)
- (3) Submarines
 - (a) Nuclear (SSN)
 - (b) Nuclear-ballistic missile (SSBN)
 - (c) Guided missile (SSGN)
- b. Other combatant ships. These include patrol-combatant ships, amphibious-warfare ships, and mine-warfare ships.
 - (1) Patrol combatants (PC). Used for unconventional warfare operations. The PC is designed for high speed/heavy-payload needs along with good sea-keeping qualities. Used in shallow coastal waters.
 - (2) Amphibious warfare ships. Can embark and deploy a Marine battalion landing team (BLT). They can use helicopters, landing craft, amphibious vehicles, and combinations of these methods.
 - (a) Amphibious assault (general purpose) (LHA)
 - (b) Amphibious assault (multipurpose) (LHD)
 - (c) Amphibious transport dock ships (LPD)
 - (d) Dock landing ships (LSD)
 - (e) Amphibious/Fleet command ships (LCC)
 - (3) Mine warfare. Specialized ships are designed as mine hunter-killers capable of performing reconnaissance, classification, and neutralization of moored and bottom mines.
 - (a) Mine countermeasures ship (MCM)
 - (b) Mine hunter, coastal (MHC)
 - (c) Mine counter measures-command ships (MCS)
- 2. Auxiliary ships. The type of support an auxiliary ship gives determines its letter designation. "A" is the initial letter

for all auxiliary ships. There are four general categories of auxiliary ships:

- a. Underway replenishment ships
 - (1) Ammunition ship (AE)
 - (2) Stores ship (AF)
 - (3) Combat stores ship (AFS)
 - (4) Fleet oiler (AO)
 - (5) Fast combat support ship (AOE)
 - (6) Replenishment oiler (AOR)
- b. Material support ships
 - (1) Repair ship (AR)
 - (2) Submarine tender (AS)
- c. Fleet support ships
 - (1) Salvage ship (ARS)
 - (2) Submarine rescue ship (ASR)
 - (3) Fleet tug (ATF)
 - (4) Salvage and rescue ship (ATS)
- d. Other auxiliaries
 - (1) Hospital ship (AH)
 - (2) Surveying ship (AGS)
 - (3) Oceanographic research ship (AGOR)
 - (4) Cable repair ship (ARC)
- 3. Combatant craft. Combatant craft are small craft that are used in support of combat operations. This includes patrol craft, landing craft, and minesweeping craft.
 - a. Landing craft, air cushion (LCAC)
 - b. Utility landing craft (LCU)
 - c. Mechanized landing craft (LCM)
 - d. Assault amphibian vehicles (AAV)
 - e. Special warfare craft (SWC)

- f. Patrol boats (PB)
- g. Swimmer delivery vehicles (SDV)
- 4. Support craft. These are miscellaneous small craft that are mainly used in Navy yards in support of ship operations. Most of these begin with a Y to designate yard craft. Completely undesignated craft have IX as a designation.
 - a. IX 21 - USS *Constitution*
 - b. Ferryboats (YFB)
 - c. Harbor utility craft (YFU)
 - d. Fuel oil barge (YO)
 - e. Seamanship training craft (YP)
 - f. Large harbor tug (YTB)
 - g. Medium harbor tug (YTM)
 - h. Small harbor tug (YTL)
 - i. Torpedo weapon retriever (TWR)
 - j. Nuclear-propelled research submarine (NR)
 - k. Deep submergence rescue vehicles (DSRV)
 - l. Large auxiliary floating drydock (AFDB)
 - m. Medium auxiliary floating drydock (AFDM)
 - n. Small auxiliary floating drydock (AFDL)
 - o. Auxiliary repair dock (ARD)

K. Underway replenishment

- 1. Naval ships must always maintain a condition of readiness. Therefore, biweekly replenishment at sea usually occurs so the ship can maintain readiness standards. While highly unusual for individuals to fill their automobile fuel tank when nearly full, such actions are required for naval vessels.
- 2. The two types of replenishment at sea are CONREP and VERTREP.
 - a. CONREP stands for connected replenishment method. By rigging lines between two vessels, a transfer of commodities and fuel can occur.
 - b. VERTREP indicates the transfer of personnel and cargo by Navy helicopters, usually the H-46 *Sea Knight*. Fuel is not transferred through vertical replenishment.

Vertical replenishment is becoming the favored method for cargo transfer. With VERTREP the cargo comes aboard faster than the crew can unload it.

L. Home ports

1. East coast include: Norfolk, VA; Little Creek, VA; Mayport, FL; Ingleside, TX
2. West coast include: Bremerton, WA; Everett, WA; San Diego, CA; Pearl Harbor, HI
3. Abroad include: Sasebo and Yokosuka, Japan; Gaeta and La Maddalena, Italy; Guam

M. Initial training

1. NROTC Seniors who select SWO pick their ship assignment in March of their senior year via a web based selection process, based on nationwide class ranking.
2. New graduates report to first ship for approximately 6 months to complete SWO PQS. After their OOD qualification, new ensigns will attend a shortened, tailored SWOS to prepare them for their SWO board and billets onboard their ship.

N. Shipboard organization (see Lesson 8 for detailed descriptions)

1. Junior Officers who report to a ship as division officers will generally be assigned to a department (such as Engineering, Operations, or Deck) and will work directly for that respective department head. The department head will work administratively for the ship's Executive Officer and operationally for the ship's Commanding Officer.
2. Within the division, a division officer normally has a Leading Chief Petty Officer (LCPO) running the day-to-day operations of the division. Working for the LCPO is a Leading Petty Officer (LPO), generally the most senior E-6, and working for the LPO are the Work Center Supervisors (WCS). Everyone else in the division falls under the responsibility of the Work Center Supervisors.

O. First sea tour

1. The first sea tour lasts 20-24 months. During this time, the JO will be a division officer for at least one, possibly more, divisions. The single most important goal of this tour is attainment of the Surface Warfare Officer (SWO) warfare designation pin. The division officer has several other primary duties, including division performance; division conduct; watch, quarter and station bill; material condition and readiness of equipment and spaces; work supervision; and DC readiness, to name just a few.
2. In addition to these normal duties, the JO can expect several collateral duties. These duties are also important and

carrying them out successfully is essential to a successful career.

3. As mentioned above, the goal of a budding surface warrior is his/her warfare pin. To earn this, the JO must qualify as OOD (in port and underway), DIVO, 3M, basic DC, JEOOW and CICWO, and must pass a SWO oral board.
 4. Life aboard ship could best be described as busy. Typical deployment cycles are 6 months on deployment and 12-18 months at home doing upkeep and local operations.
 5. When ashore, one has non-duty weekends and nights off and is free to go home. Duty requires one's presence aboard the ship. One always has OOD and/or CDO watches on their duty days.
 6. At sea, life consists of watches, division duties, training, qualifications and personal upkeep (food, sleep, etc.). Watches can be for up to 12 hours a day and, in the remaining time, one has to perform the duties of a division officer. Good time management skills are essential.
- P. Second sea tour. Upon completion of this initial sea tour, a JO will be transferred to a different ship and will complete a follow-on, 18-month sea tour. This tour will normally involve leading a much larger division and will include all of the same responsibilities encountered in the initial sea tour, only in a much larger scale. Nuclear power-designated SWOs will attend Nuclear Power Training following their first sea tour and, upon completion, will be assigned to the Engineering department of an aircraft carrier.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 13

HOURS: 2.0

TITLE: Submarine Warfare Community

I. Learning Objectives

- A. The student will know the designations, capabilities, characteristics, and missions of all submarines.
- B. The student will know the objectives and missions of the submarine community and how these contribute to the overall missions of the U.S. Navy.
- C. The student will know the types of submarines in use by the U.S. Navy.
- D. The student will know the operating cycles of submarine crews.
- E. The student will know the selection process for nuclear-power training.
- F. The student will know the training required before being assigned to a nuclear-powered vessel.
- G. The student will know the submarine officer career path and opportunities, including the requirement for joint duty.

II. References and Texts

A. Instructor references

- 1. The Naval Officer's Guide, Chapters 10, 11
- 2. The Bluejacket's Manual, Chapters 12, 13, 14
- 3. Jane's Fighting Ships
- 4. Naval Officer, Nuclear Trained prospectus
- 5. U.S. Navy Fact File website at:
www.chinfo.navy.mil/navpalib/factfile/ffiletop.html
- 6. SECNAVINST 7220.65 (Series), "Nuclear Officer Incentive Pay"

B. Student texts

- 1. The Naval Officer's Guide, Chapters 10, 11
- 2. The Bluejacket's Manual, Chapters 12, 13, 14

III. Instructional Aids

- A. Whiteboard/chalkboard

- B. Course Coordinator CD-ROM
- C. Computer/projection system
- D. Slides of U.S. Navy submarines (See Course Coordinator CD and/or U.S. Fact File website.)
- E. VCR/Monitor
- F. Videos:
 - 1. "Today's Submarine Force," 19 min
 - 2. "Fast Attack Submarines of Hampton Roads," 27 min

IV. Suggested Methods and Procedures

- A. Have the staff submarine officer or guest submarine officer give the lecture.
- B. Use CD-ROM, videos or portions of the recommended video to heighten interest.

V. Presentation

- A. Give a brief history of the submarine.
 - 1. Bushnell's Turtle
 - a. First submarine in 1775
 - b. Was not successful in carrying out attacks in New York Harbor against the British (*HMS EAGLE*)
 - c. Human powered
 - d. Submerged endurance of about 30 minutes
 - 2. Following the Turtle, various attempts were made to construct and operate submarines.
 - 3. During the Civil War, the South constructed a submarine (*CSS Hunley*) in an attempt to disrupt the blockade of Charleston, SC. Although the target was sunk, the submarine was also lost in the attack.
 - 4. The first real use of submarines as ships of war came during WWI by the Germans (U Boats).
 - 5. The Second World War amplified the usefulness of submarines as a weapon of war. Japan entered the war with six million tons of merchant shipping and added another four million tons over the course of the war. By the war's end, over nine million tons of shipping had been sunk by U.S. forces. Over 55% of the 9 million tons was sunk by submarines. Submarines sank more enemy warships than any other naval

arm. This is a significant accomplishment considering the submarine force never exceeded more than 1.6% of total naval personnel.

6. Following WWII, the most important product for the submarine force was developed.
 - a. Nuclear power allowed a submarine to stay submerged indefinitely. The submarine was now limited only by its crew endurance.
 - b. Submerged speed increased drastically.
7. The U.S. uses three types of submarines:
 - a. SSN: Nuclear-powered, fast-attack submarine. An extension (and obvious improvement) of the WWII diesel submarines.
 - b. SSBN: Nuclear-powered, ballistic-missile submarine. Mobile missile platform. Developed in response to the cold war.
 - c. SSGN: Nuclear-powered, cruise-missile submarine. Converted SSBN to carry up to 156 TLAM's.

B. Discuss the characteristics and missions of the following submarines and relate how the missions relate to the missions of the Navy:

1. SSN
 - a. *Seawolf* class (SSN-21). Our most modern design, designed to counter the numerical superiority and advancing technology.
 - b. *Los Angeles* (improved 688). The mainstay of the attack submarine fleet. Has a vertical launch capability, bow planes, and upgraded sensors and fire control system.
 - c. *Los Angeles* class (SSN-688). The original version of the *Los Angeles* class. Most will be back-fitted with sensor and fire control system upgrades, but will not get bow planes or VLS.
 - d. *Virginia* class (SSN-774). Modified *Los Angeles* with many major improvements and upgrades. First boat commissioned in Fall 2004.
2. The missions of the SSN
 - a. ASW including battle group support
 - b. ASUW
 - c. Mine warfare

- d. Intelligence gathering
 - e. Strike warfare
 - f. Covert insertion/extraction
- 3. SSBN
 - a. *Ohio* class (726). This class may be the United States' only strategic deterrence in the near future. Total of 18 planned; 8 carrying the C-4 missile and 10 carrying the D-5 missile. The world's longest and quietest submarine. The 24 missiles that one *Ohio* class carries make it the third most nuclear-capable "nation" in the world. Has superb stealth and sensors. Overall, a very capable submarine.
 - b. All pre-*Ohio* Class SSBNs have been decommissioned.
- 4. The missions of the SSBN
 - a. Strategic deterrence
 - b. As a secondary mission, it can perform the same missions as an SSN.
- C. Outline the operating cycles for SSNs and SSBNs
 - 1. SSN
 - a. Will spend 50% of a given cycle in homeport.
 - b. Deployment to WESTPAC, etc., can be as long as 6 months.
 - c. Local operations
 - d. Refits/Overhauls
 - 2. SSBN
 - a. Two crews ("Blue" & "Gold")
 - b. While one crew has the ship, the other one is on land training to relieve the other crew.
 - c. One crew will have the boat for about three months and then turn it over to the other crew.
- D. Discuss nuclear-power selection process
 - 1. Eligibility requirements
 - 2. All majors qualify with the completion of one year of calculus and one year of calculus-based physics

3. Stress academic excellence. Although the Naval Reactors department prefers engineering majors, selection is based on ability and performance. Criteria are very similar for any major.
4. About one year prior to graduation, an application is submitted to Naval Reactors via NSTC. The application is screened for educational background.
5. If approved, the midshipmen are sent to Naval Reactors in Washington, D.C., and are interviewed by:
 - a. Naval Reactors staff (technical interviews)
 - b. Director of Naval Reactors
6. If selected for nuclear power, midshipmen choose either surface or submarines. Both are eligible for initial signing bonus (currently \$4,000) and a bonus (\$2,000) upon completion of prototype.

E. Nuclear power training

1. Naval Nuclear Power Training Command, Charleston, SC
 - a. 6-month course of instruction
 - b. Includes math, physics, mechanical engineering, electrical engineering, heat transfer, fluid flow, chemistry, materials, radiological fundamentals, reactor dynamics and core characteristics, reactor plant systems and advanced reactor plant operations.
2. Land-based prototype
 - a. A six-month, hands-on operational course of instruction performed on an actual naval nuclear propulsion plant.
 - b. Located in:
 - (1) Ballston Spa, NY
 - (2) Charleston, SC
3. All nuclear-trained officers go through nuclear power school and prototype.
4. Following prototype, submarine-designated officers go to Submarine Officer Basic Course in Groton, CT, for three months.

F. Incentives for nuclear power

1. Promotional opportunity: Highest in the Navy
2. Command opportunity: Highest in the Navy

3. Financial incentives
- G. Discuss life aboard submarines.
1. Recommend showing a video depicting life underway.
 2. Discuss the organization of the SSN and SSBN wardroom.
 3. Discuss qualifications.
 - a. Engineering officer of the watch -- In charge and responsible for the safe operation of the nuclear propulsion plant.
 - b. Diving officer of the watch -- Responsible for maintaining ship's depth and trim.
 - c. Officer of the deck -- The CO's direct representative, responsible for the safety and operation of the ship.
 - d. Duty officer -- The CO's direct representative in port, responsible for the entire ship.
 4. Submarine qualification. This ensures that an individual is tactically competent and ready for warfare qualification.
 5. Discuss tour rotation
 - a. Division officer tour/typical jobs:
 - (1) Reactor controls assistant
 - (2) Electrical assistant
 - (3) Main propulsion assistant
 - (4) Chemistry and radiological controls assistant
 - (5) Damage control assistant
 - (6) Assistant weapons officer
 - (7) Sonar officer
 - (8) Communications officer
 - (9) First lieutenant
 - b. Junior officer shore tour
 - c. Department head sea tour
 - d. Post department head shore tour

- e. XO/CO sea tours (shore tour follows XO tour)
- f. Post command shore tour
- g. Joint duty

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 14

HOURS: 2.0

TITLE: Aviation Community

I. Learning Objectives

- A. The student will know the designations, capabilities, characteristics, and missions of all major naval aircraft.
- B. The student will know the contribution of the aviation community to the overall mission of the Navy.
- C. The student will know the training received prior to reporting to an operational squadron.
- D. The student will know the types of job assignments available for junior officers in naval aviation.
- E. The student will know what to expect as a junior officer in a squadron.
- F. The student will know the aviation officer career path and opportunities and the requirement for joint duty.
- G. Given an aircraft squadron designation, the student will know its basic mission and the type of aircraft assigned.

II. References and Texts

A. Instructor references

- 1. The Naval Officer's Guide, Chapters 10, 11
- 2. The Bluejacket's Manual, Chapters 12, 13, 14
- 3. LINK-Perspective at:
<http://www.npc.navy.mil/ReferenceLibrary/Publications/LinkPerspective/>
- 4. Jane's All the World's Aircraft
- 5. Naval Aviation Guide
- 6. U. S. Navy Fact File website at:
www.chinfo.navy.mil/navpalib/factfile/ffiletop.html

B. Student texts

- 1. The Naval Officer's Guide, Chapters 10, 11
- 2. The Bluejacket's Manual, Chapters 12, 13, 14

III. Instructional Aids

- A. Videos:
 - 1. "Wings of Eagles, Wings of Gold," 28 min
 - 2. "Ready on Arrival," 29 min
 - 3. "Flight - The Romance of Naval Aviation," 8 min
 - 4. "Flight Deck (Air Power)," 48 min
 - 5. "The Carrier Battle Group," 20 min

- B. VCR/Monitor
- C. Whiteboard/chalkboard
- D. Computer/projection system
- E. Course Coordinator CD-ROM

IV. Suggested Methods and Procedures

- A. Method options: Have the aviation representative on the staff present this lecture.
- B. Procedural and student activity options: Video viewing, lecture and discussion.

V. Presentation

- A. Give brief history on the birth of naval aviation and weapons systems up to the present day.
 - 1. Early development
 - a. 14 November 1910. Eugene Ely took off from a wooden platform built over the foredeck of the United States cruiser *Birmingham*, the first time naval aircraft were launched from a ship. The aircraft dropped after leaving the platform and skimmed the water before gaining altitude and landing ashore.
 - b. 18 January 1911. Eugene Ely completes his "double" by landing his Curtiss biplane on a specially erected deck on the cruiser USS *Pennsylvania*. The aircraft was dragged to a stop by sandbags attached to ends of ropes stretched across the deck so that they were picked up by hooks under the landing gear.
 - c. 8 May 1911. The first naval aircraft was ordered. Naval aviation is born.
 - d. The first carrier in the U.S. Navy was the converted carrier USS *Langley* in 1922. The USS *Ranger* was the first carrier built from the keel up in 1934.

- e. Most naval aircraft during the period were land based and used for patrol purposes.
- 2. Growth during WWI and WWII
 - a. WWI naval aircraft were used to spot U-boats on patrol missions. Planes, in general, during this period were used primarily for reconnaissance. Only during the later stages of the war did aerial combat become widely accepted.
 - b. Between the wars, carriers were built, but they were not considered capital ships. Battleships and cruisers made up the first lines of defense. Pearl Harbor changed all of that when the battle line was severely damaged and the carriers were not in port. Out of necessity, naval aviation took the war to the enemy.
- 3. Korea saw the first introduction of jet aircraft.
- 4. Navy in space. Several naval officers have become astronauts. Carriers and their helicopters were used to recover *Mercury* and *Apollo* astronauts when they splashed down in the Pacific.
- B. Briefly discuss the various missions of naval aviation.
 - 1. Strike warfare. Attack aircraft carry air-to-surface ordnance to destroy ground installations or vessels.
 - 2. Anti-air warfare. Used to nullify or reduce the effectiveness of an attack by hostile aircraft or guided missiles. Includes aircraft, surface missiles, guns, and electronic countermeasures. Speeds of modern aircraft and missiles require that defensive measures be taken as early as possible, at the greatest practicable distance from the attacking force.
 - 3. Anti-submarine warfare. The effectiveness of the German U-boat campaign against Great Britain during WWII showed that submarines posed a great threat to a nation. Aircraft could be used to cover large areas rapidly and are relatively invulnerable to submarine defensive measures. The presence of a large post-war Soviet submarine fleet saw land-based and carrier-based patrol aircraft emerge, as well as helicopters designed to search for and attack submarines.
 - 4. Anti-surface warfare. Aircraft are used much like anti-submarine warfare to cover large areas, destroy surface combatant threats and conduct surface surveillance.
 - 5. Mine warfare. Aircraft can be used to rapidly lay mines or search for mines. Helicopters can be adapted to conduct rapid, cost-effective sweeping of minefields.

6. Special warfare. Aircraft can be used to rapidly insert/extract covert forces.
7. Non-combat operations. Aircraft are adept at transporting large numbers of personnel rapidly. In modern times, they have been called upon to evacuate personnel from strife-torn countries. Aircraft can also be used to deliver food and medicines to inaccessible areas after a natural disaster. Other types of operations include drug interdiction, disaster relief, and search and rescue.
8. Fleet support. Replenishment ships can use helos to conduct vertical replenishment operations quickly without the need for ships to come into port or alongside one another. Ammunition, mail, personnel, and other supplies can be delivered over great distances.
9. Command and control. Aircraft can be used as early warning platforms, using their altitude to extend the radar horizon. Aircraft can be used as communication relay stations during EMCON conditions to keep the battle group covert. Aircraft are also used to communicate with strategic forces, namely SSBNs.
10. Search and Rescue. Aircraft can be used to provide rapid search and rescue missions to find personnel lost at sea, when survival can be measured in minutes.

C. Discuss aircraft model designation

1. The letter in an aircraft designation is to signify the primary mission of an aircraft (i.e., S-3).
2. If the aircraft's mission has been modified, then the mission modifier will precede the basic mission symbol (i.e., ES-3).
3. The number in an aircraft designation refers to the sequential design number in a mission series (i.e., S-3 replaced the S-2 and is the third anti-submarine design).
4. A letter following the number in an aircraft designation is the modification to an original design (i.e., S-3B is the second major modification to the original S-3 design).

D. Discuss naval aircraft squadron designation system.

1. Squadron prefix: This identifies whether the aircraft in a squadron are rotary or fixed wing (i.e., V for fixed, H for rotary).
2. The squadron class symbol designates the primary mission of the squadron.
3. The squadron sub-class symbol designates a mission modifier (i.e., VS).

- E. Identify the aircraft squadron symbols, type aircraft utilized, mission, and home port.
1. VT Fixed-wing training; T-6, T-34, T-44, T-45;
Pensacola, Corpus Christi, Whiting, Meridian,
Kingsville
 2. HT Rotary-wing training; TH-57; Whiting
 3. VF Fighter squadron; F-14; Oceana
 4. VFA Fighter/Attack squadron; F/A-18; Lemoore,
Jacksonville
 5. VA Attack squadron; The F/A-18, F-14D, AV-8; Virginia
Beach, Cherry Point
 6. VS Fixed-wing ASW, carrier based; S-3; Jacksonville,
North Island
 7. HS/
HSL Rotary-wing ASW; H-60B/F;
Jacksonville, Norfolk, San Diego, Pearl Harbor
 8. VP Land-based, fixed-wing patrol aircraft; P-3;
Jacksonville, Brunswick, Whidbey Island, Kaneole Bay
 9. VX Experimental, test aircraft; various aircraft;
Patuxent River
 10. VC Fixed/rotary-wing transport; C-2, C-HC-130, C-9, U-2,
H-46 (being phased out), H-53
- F. Review various types of aircraft utilized in the fleet (show slides of aircraft types).
1. Attack class: AV-8 *Harrier*. Vertical/short-takeoff attack aircraft used by USMC. May be based on amphibious aviation ships.
 2. Fighter/Attack class: F/A-18 *Hornet*. Carrier-based fighter/light-attack aircraft that replaced the F-4 and A-7 in the USN and USMC. All versions of the F/A-18 are now employed: F/A-18A/B/C/D. The F/A-18E/F is now being introduced to the fleet.
 3. Fighter class: F-14 *Tomcat*. Designed and employed as a carrier-based large fighter, it eventually evolved in the early 90's to a fighter/attack role. All missions of the F-14 are currently under transition to the F-18F ("Super Hornet") using F-14 aircrews. The F-14 will no longer be in operational service by FY06-07.
 4. Patrol class: P-3 *Orion*. Land-based, long-range patrol and ASW aircraft
 5. Antisubmarine class: S-3 *Viking*. Originally designed and employed as a carrier-based medium to long-range ASW

aircraft. With upgraded components, the S-3B became a multi-purpose battle group asset and was employed in ASUW, ASW, battle control, OTHT, and air refueling missions. With most of its originally designed missions now obsolete, even its more recent primary mission as a carrier-based tanker is now transitioning to the F-18F "Super Hornet." The S-3 Viking is currently being minimized operationally and should be completely out of service by FY07-08.

6. Reconnaissance class: F-14 TARPS (Tactical Air Reconnaissance Pod System)
 7. Airborne Early Warning class: E-2 *Hawkeye*. Carrier-based prop plane with a dome on top housing a radar antenna.
 8. Rotary-wing aircraft:
 - a. CH-46 *Sea Knight*. Tandem rotor helicopters used by USN for VERTREP and by USMC for troop transport.
 - b. SH-3 *Sea King*. Used for parts and personnel transport to underway units around the world.
 - c. H-53 *Sea Stallion*. Cargo transport helicopter and USMC troop transport. USN also uses a version for minesweeping.
 - d. SH-60 *Seahawk*. LAMPS III (Bravo) aircraft based on small ships for ASW and (Foxtrot/Romeo) CVs for SAR and ASW.
- G. Provide an overview of the airborne weapon systems used in the fleet. (A more in-depth discussion will occur in the naval weapons class.)
1. 20-mm gun. A six-barreled Gatling-type gun that shoots at 4,000 or 6,000 rounds per minute.
 2. Air-to-air missiles:
 - a. Sparrow III. Medium-ranged (10 nm), semi-active missile. Uses reflected energy from firing aircraft's radar to home in on target.
 - b. Sidewinder. Short-range (5 nm), passive missile using infrared homing, seeking hot exhaust gases emitted by the target.
 - c. Phoenix. Large, long-range (50-60 nm), active missile carried by the F-14 only. Has its own radar to guide it to the target.
 - d. AMRAAM (*Advanced medium-range, air-to-air missile*). Intended to replace the Sparrow.
 3. Air-to-ground missiles:

- a. HARM (*High-speed, Anti-Radiation Missile*). Long-range (50 nm), anti-radiation missile designed for use against radar installations.
 - b. SLAM (*Stand-off, Land-Attack Missile*). A modified Harpoon
 - c. Harpoon. Long-range (60 nm), anti-surface missile.
 - d. Maverick (*electro-optical or infrared guidance*). The Maverick is an air-to-surface weapon intended primarily for use against tanks.
 - e. Wall Eye. Glide bomb with a shaped charge.
4. Aircraft rockets
- a. 2.75" rockets. Unguided rockets carried in pods mounted on either helos or attack aircraft.
 - b. 5.0" rockets. Unguided rockets carried in pods of attack aircraft.
5. Aircraft bombs
- a. Low-drag, general-purpose (GP) bombs. Iron bombs ranging in size from 500 lbs. to 2,000 lbs.; no guidance system; used against targets for blast/fragmentation effect where collateral damage is not a consideration.
 - b. Snake eye. Retarded-delivery GP bombs. A GP bomb like above with fins attached that open when ejected to retard the bombs fall. This allows the aircraft to deliver it at low altitude and not get caught in the resulting blast.
 - c. FRAG bombs. Bombs that produce high fragmentation; dropped in clusters against troops/ground targets.
 - d. Depth bombs. Bombs designed to explode underwater for ASW work. The USN has no conventional depth bombs in its inventory.
 - e. Incendiary bombs. Bombs designed to create large firestorms; contains mixtures of gasoline or jet fuel and an agent.
 - f. Chemical bombs. Designed to spread chemical agents over a wide area (mustard gas, phosgene, tear gas).
 - g. Cluster bombs. Break apart to form several hundred smaller bomblets, which disperse over a wide kill zone.
 - h. Practice bombs. Loaded with sand or water; uses a small smoke charge to mark hits; inert.

- i. Concussion/Fire bomb (FAE: Fuel-Air Explosive). Uses concussion to destroy target with over-pressure.
 - j. LGB. Laser-guided bombs.
 - k. JDAM. Satellite-guided bombs.
 - 6. Air-launched torpedoes
 - a. MK-46. A version of the ship-launched torpedo with parachute pack to retard speed of water entry that can be launched by helos or fixed-wing aircraft.
 - b. MK-50. An upgraded version of the MK-46.
 - 7. Aircraft mines. Mines may be carried by USN and USAF aircraft to rapidly plant an area. Mines range from special purpose mines to converted conventional bombs.
 - 8. Nuclear weapons. Some naval aircraft are capable of delivering such weapons.
- H. Discuss the training program for naval aviators and naval flight officers.
- 1. General for all student aviators and flight officers: Aviation/Preflight indoctrination
 - a. Military phase (for non-NROTC or academy graduates). Primarily OCS, learning the basics of military life.
 - b. Academic phase (all). Aerodynamics, engineering, navigation courses.
 - c. Physical fitness phase (all students). Aviators must be in top shape to handle the stress of flight (high g-forces); includes running, obstacle course, swimming, and land and water survival training.
 - 2. Naval aviator primary training
 - a. Ground school. Classwork on weather, flight publications, flight rules, and regulations.
 - b. Solo (after several familiarization flights).
 - c. Familiarization (formation/night familiarization). Basic flight:
 - (1) Basic prop (T-34)
 - (2) Pre-helicopter (T-34)
 - (3) Basic jet (T-2/T-45/TA-4J)
 - d. Advanced training

- (1) Advance jet (T-45, TA-4J)
 - (2) Advance prop (T-44A)
 - (3) Helicopter (TH-57)
3. Naval flight officer (NFO)
 - a. Basic NFO training. Classwork (similar to primary pilot courses), initial familiarization flights, including airmanship; then concentrates/refines navigation, instrument flying, communications, copilot duties.
 - b. NFO specialization categories:
 - (1) Radar intercept officer (RIO) -- F-14 (eventual transition to the F/A-18F)
 - (2) Airborne electronic warfare -- EA-6B [Electronic Countermeasures Officer (ECMO)]
 - (3) Tactical coordinator (TACCO) -- S-3/P-3
 - (4) Airborne Tactical Data -- E-2 Command Information Control Officer (CICO), Air Control Officer (ACO), and Radar Officer (RO)
- I. Identify the type of job assignments a new junior officer can expect to receive, such as branch officer/division officer:
 1. Operations
 2. Maintenance
 3. Safety
 4. Administration
- J. Discuss what life is like in an aviation squadron as a junior officer.
 1. Primary job assignment. Branch (work center) officer maintenance, legal officer, schedules writer, NATOPS officer, ground safety officer, etc.
 2. Collateral job assignment. Public Affairs Officer (PAO); Educational Services Officer (ESO); Morale, Welfare and Recreation (MWR); etc.
 3. Boat officer. Small boat officer in foreign ports.
 4. Watches. Squadron duty officer, Integrity Watch Officer (IWO) when on a CV/CVN.

5. Ready Room etiquette. The ready room is generally a multipurpose room: briefing room, meeting/lecture room, social room, movie "theater," etc.
- K. Discuss flight pay for the junior officer. It starts the day the officer begins primary phase of flight training and generally continues even during shore duty. The amount increases with time with the maximum rate reached at fourteen years and decreases after 22 years. Flight pay is based on a schedule known as the "gate system." Per diem is usually received for land-based deployments.
- L. Discuss the typical career pattern -- Naval Aviator/Naval Flight Officer
 1. First sea tour
 - a. Assignment. Fleet squadron; 1-3 deployments including workups; 200 hours/100 traps per deployment average.
 - b. Duration. 3 years.
 2. First shore tour
 - a. Assignment. Fleet replacement squadron (FRS) -- informally called the RAG -- training command, test pilot school, test and evaluation squadrons, shore staff, NROTC, etc.
 - b. Training. Ongoing while in a flying billet.
 - c. Educational opportunities. PG school, VA, Navy Campus, tuition assistance, etc.
 - d. Duration. 3 years.
 3. Second sea tour
 - a. Assignment
 - (1) Second squadron tour. Difficult to obtain (usually only available in unusual circumstances).
 - (2) Disassociated tour. Usually on a carrier. Examples: Catapult officer, TAO, assistant navigator, assistant strike ops, CARGRU or airwing staff.
 - b. Duration. 2 years.
 4. Second shore tour
 - a. Assignment. Training command/Shore staff/VT instructor.

- b. Educational opportunities. PG utilization; service colleges.
 - c. Duration. 2 years.
- 5. Squadron department head tour (third sea tour)
 - a. Assignment. Operations, administration, maintenance, or safety.
 - b. Command screening. Operations and maintenance are key prerequisites for command.
 - c. Duration. Approximately 2.5 years.
- 6. Squadron command
 - a. Executive officer. 1 to 1.5 years in squadron that the officer will command.
 - b. Commanding officer. 1 to 1.5 years.
 - c. Equal opportunity for pilots and NFOs (ideally).
- 7. Senior shore tour
 - a. Major shore staff/joint duty staff
 - b. Washington
 - c. Subspecialty
 - d. Senior service college
- 8. Senior sea tour: Deep draft vessel (CV/LPH)

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON: 15

HOURS: 1.0

TITLE: Other Officer Communities

- I. Learning Objective: The student will know other unrestricted line, restricted line, and staff corps specialists, their career path and opportunities, including joint duty (if applicable), and how each contributes to the mission of the U.S. Navy.
- II. References and Texts
 - A. Instructor references
 - 3. Aerospace Engineering Duty Officer prospectus
 - 4. Aerospace Maintenance Duty Officer prospectus
 - 5. Naval Engineering Duty prospectus
 - 6. Naval Officer, Chaplain Corps prospectus
 - 7. Naval Officer, Civil Engineering Corps prospectus
 - 8. Naval Officer, Cryptology (Special Duty Officer) prospectus
 - 9. Naval Officer, Dental Corps prospectus
 - 10. Naval Officer, Intelligence Officer prospectus
 - 11. Naval Officer, Judge Advocate General's Corps prospectus
 - 12. Naval Officer, Medical Facilities Guide
 - 13. Naval Officer, Medical Service Corps prospectus
 - 14. Naval Officer, Medical Corps prospectus
 - 15. Naval Officer, Nurse Corps prospectus
 - 16. Naval Officer, Supply Corps prospectus
 - 17. NAVMED P5128, "U.S. Medical Department Officer Career Guide"
 - 18. Special Operations Bulletin
 - 19. Special Operations (1140) Community Brief
 - 20. The Navy Seal, Officer Guide to Naval Special Warfare
 - 21. LINK-Perspective at:
<http://www.npc.navy.mil/ReferenceLibrary/Publications/LinkPerspective/>

22. In and Out of Harm's Way: A Nurse Corps History

- B. Student text: In and Out of Harm's Way: A Nurse Corps History
(for Nurse Corps midshipmen only)

III. Instructional Aids

A. Videos:

1. "Someone Special," 26 min
2. "Making the Navy Move: The Navy Supply Corps," 12 min
3. "The Navy Health Care Team," 17 min
4. "The Navy Physician," 17 min
5. "I Am . . . A Navy Nurse," 16 min

B. VCR/Monitor

- C. Computer/projection system and PowerPoint slides or overhead projector and locally-prepared transparencies

IV. Suggested Method: Although the NROTC program is training midshipmen for the unrestricted line, there may be a number of midshipmen who: (A) are not medically qualified for URL, (B) may have long term goals of transitioning to a restricted line community, or (C) desire to pursue a specialized URL career. If possible, have a number of career nights with officers from various communities presenting and answering questions about their respective communities.

V. Presentation

- A. Designators. A designator is a four-digit, numeric code that describes the type of job an officer is designated to do. The last number indicates the status of an officer, with a "5" meaning reserve, "0" regular, and "7" training active reserves (TAR).

B. Types

1. Line Officers. These officers perform the immediate mission of the Navy.
2. Staff Officers. Staff officers perform services and support the line communities so that the line communities can perform their mission.
3. TAR Officers. These officers are reserve officers on active duty who specialize in the training of reserves.

- C. Descriptions (attached)

TITLE: AEROSPACE ENGINEERING DUTY OFFICER (AEDO/151X)

I. Job Description. An AEDO provides professional management and technical direction in the design, development, acquisition, production and logistic support of naval aircraft, air and space weapon systems and their related support equipment.

II. Qualifications

A. Operational experience

1. Completion of fleet squadron training.
2. Aviation designator qualification.
3. At least two operational sea tours (desired).

B. Educational experience. Postgraduate education in a technical field (desired, not required).

C. After meeting the above qualifications, interested officers apply via the Line Transfer/Redesignation Board, which meets semiannually. Officers are normally selected as junior to mid-grade lieutenant commanders.

III. Career Opportunities

A. One-third of these billets give the officer the opportunity to both fly aircraft and/or operate new weapons systems throughout the various phases of development.

B. In general, AEDO assignments require working with defense engineers to design, develop, procure, and ultimately maintain fleet aircraft and space systems.

C. Commanding officers of research, development, testing facilities, and industrial shore sites supervise thousands of civilian and military personnel and manage multi-million dollar projects.

D. AEDOs have opportunities to attend the Naval War College and the Industrial College of the Armed Forces.

TITLE: AEROSPACE MAINTENANCE DUTY OFFICER (AMDO) (152X)

- I. Job Description. Provide full-time professional maintenance and material logistic support managers for naval aviation. This means ensuring aircraft maintenance is done and that flight crews are provided safe aircraft for flight.

- II. Qualifications
 - A. Fleet input
 - 1. Extensive background in aviation maintenance (desired).
 - 2. Should be lieutenant or below in grade to transfer.
 - 3. Must agree to terminate flying status, if applicable.
 - 4. Undergraduate degree in business, engineering, or sciences (desired).
 - B. Selected applicants enter the 10-week aviation maintenance officer course. Here, concepts of management are stressed along with the day-to-day duties of the aviation maintenance officer. This is normally followed by a two-week course in fleet readiness training on specific aircraft.

- III. Career Opportunities
 - A. Initial billets give the officer experience in managing the maintenance efforts at both the organizational (squadrons) and intermediate (Aviation Intermediate Maintenance Departments (AIMDs)) levels.
 - B. Senior grades serve as policy makers for aviation maintenance and logistic support.
 - C. Middle-stage AMDOs have the opportunity to attend Naval Post-graduate School in Monterey, CA. Senior officers can request to attend the Industrial College of Armed Forces, Defense Systems Management College, or Naval War College.

TITLE: CHAPLAIN CORPS (4100)

- I. The role of the Chaplain Corps is to provide religious ministries to meet the needs of naval service personnel and their dependants.
- II. Accession and training
 - A. Eligibility
 - 1. Individual must hold a baccalaureate degree from an accredited college or university.
 - 2. 90 graduate semester hours in theology or related courses from an accredited school.
 - 3. An ecclesiastical endorsement from a faith group that has applied for and received recognition from the Department of Defense.
 - B. The Chaplain Corps student program (chaplain candidate program officer (CCPO)). Assigned to a non-mobilizing reserve unit where they will train and drill in a non-paid status.
 - C. Entrance into the Chaplain Corps is by:
 - 1. Direct accession
 - 2. Recall of inactive reserve chaplains
 - 3. Superseding appointment of CCPOs
 - D. Training. Chaplain Corps officers receive initial orders to attend the seven-week Chaplain's School Basic Course. Continuing education opportunities are available throughout the chaplain's career.

TITLE: CIVIL ENGINEERING CORPS (CEC) (510x)

- I. Role of the CEC. Support to the operational elements of the navy through planning, design, construction and maintenance of shore and ocean facilities.
- II. Job Description
 - A. Engineers and architects who manage naval shore facilities and oversee construction/maintenance by the shore establishment (Seabees).
 - B. The Civil Engineering Corps possesses a limited combat capability.
- III. Career path

TITLE: CRYPTOLOGY OFFICER (161X)

I. Background

- A. Cryptologic officers' duties generally include Navy cryptologic services and national signals intelligence (SIGINT) tasks designated by the Director, National Security Agency/Chief, Central Security Service.
- B. There are presently over 720 cryptologic officers stationed aboard ships and with Naval Security Group Activities worldwide. The community accesses approximately 30 new ensigns each year.

II. Qualifications

- A. Majors. Technical fields (science and/or engineering disciplines), computer science, systems management, foreign policy and area studies, language (esp. Russian, Chinese, Arabic), or any science with good GPA.
- B. GPA. 3.0 or better.
- C. Character. Selectees must be able to get a very high security clearance allowing access to special intelligence.

III. Career path

- A. Initial training is through the Cryptologic Division Officers Course at NTTC Corry Station, Pensacola, FL. -- a rigorous, in-depth, 15-week course in the fundamentals of cryptology.
- B. New cryptologic officers will then serve as division officers in the areas of collection, reporting and analysis, administration, communications, or electronics maintenance. This is intended primarily as a training billet.
- C. Following the first tour, cryptologic officers may go to a variety of stations, including the National Security Agency, Washington, D.C., staff, systems research, sea duty, or graduate education.
- D. Prior to attaining senior leadership positions, the cryptologic officer is expected to have gained a solid knowledge of ADP applications, experience in shore station operations, expertise in furnishing cryptologic support to the fleet, and staff experience leading to an understanding of the planning, programming, and budgeting process of cryptologic resources.

TITLE: ENGINEERING DUTY OFFICER (ED/146X) (116XE)

I. Job Description. Engineering duty officers serve as technical specialists for the acquisition, construction, maintenance and modernization of ships, combat/weapons systems, ordnance systems, and electronic and space warfare systems.

II. Qualifications

A. All applicants:

1. Must have obtained a bachelor's degree in an engineering or technical discipline.
2. Those chosen will first be designated as unrestricted line officers and will be redesignated ED/14XX when they complete their first tour afloat and become warfare qualified.

B. Line transfer

1. Must also have obtained a bachelor's degree in an engineering or technical discipline.
2. Must complete one or two tours at sea before applying.
3. Must have two years of commissioned service and be warfare qualified.

III. Career Opportunities

A. Basic phase

1. Sea duty. Early in their career, and preferably onboard a combatant ship, EDs use this time to gain warfare qualification.
2. Graduate education. Done before or immediately following ED designation. A graduate degree must be in an engineering or technical field.
3. ED qualification program (EDQP). All new EDs participate in this program by attending the six-week basic course taught at the ED School, Port Hueneme, CA.

B. Professional phase. Knowledge is gained in one of the four specialties, and future assignments will be concentrated in that specialty. Each involves the design, construction, acquisition, repair, support, and modernization of the given system.

TITLE: 1700 COMMUNITY

- I. History of career development of women in the Navy
 - A. 1811. Navy surgeon recommends nurses be included among personnel at Navy hospitals.
 - B. 1908. Navy Nurse Corps established. The first 20 nurses (first women in the Navy) reported to DC.
 - C. 1917. WWI. In an effort to maximize manpower resources, Navy authorizes enlistment of women as volunteers. Designated as Yeomen (F), they unofficially become known as Yeomenettes.
 - D. 1942. The Naval Reserve Act of 1938 was amended to include the Women's Auxiliary Reserve, later known as the WAVES (Women Accepted for Voluntary Emergency Service). Women held billets in aviation, medical, communications, and supply. Mildred McAfee was selected to lead this and was sworn in as a LCDR.
 - E. 1943. Women are authorized to hold the rank of Captain. Mildred McAfee was promoted to that rank.
 - F. 1947. Army-Navy Act established the Nurse Corps as a permanent staff corps of the Navy and authorized a permanent commissioned rank for nurses.
 - G. 1948. Women's Armed Services Integration Act abolished the Women's Auxiliary Reserves and permitted women to enter the USN in regular or reserve status.
 - H. 1967. Rank restriction removed.
 - I. 1972. Women accepted into ROTC. Women eligible for command ashore. Navy nurse Arlene Duerk achieves flag rank, the first woman to do so. The term WAVES is dropped as an official title. Women officers restricted to general unrestricted line (GenURL), supply and nursing.
 - J. 1973. SECNAV authorizes aviation training for women.
 - K. 1976. U.S. Naval Academy admits women.
 - L. 1978. Women allowed to fill sea duty billets on support and noncombatant ships.
 - M. 1992. Women are still restricted by law from permanent assignment to surface combatants and submarines with a significant chance of direct involvement in combat. The Navy has requested that this ban be repealed based on women's performance in Operation Desert Shield/Desert Storm. Women officers permitted in all career fields except special warfare (SEALs) and submarines. (Refer to CHINFO Washington, D.C., 031706Z May 93 for further information.)

- N. April 1993. DOD rescinded assignment restrictions and now allows women pilots and flight officers to be permanently assigned to combat air squadrons.
- O. March 1994. First women receive orders to combat ships. USS *Dwight D. Eisenhower* was the first Navy combatant ship to have women permanently assigned and fully integrated as crew members. New assignments, in a variety of billets, have been issued to women to serve in virtually all types of Navy combatants.
- P. January 1995. GenURL disestablished and all members transitioned to fleet support (1700 community).

II. Career pattern

- A. Specialty development (logistics support; personnel, training, etc.; and space and electronic warfare)
- B. Leadership progression in specialty (XO, CO)
- C. Postgraduate school
- D. Joint tours. Three major career fields:
 - 1. Space and electronic warfare (SEW)
 - 2. Manpower, personnel, and training
 - 3. Shore-station management/Logistics support
- E. Subspecialty fields include, but are not limited to:
 - 1. Information management
 - 2. Manpower, personnel and training analysis
 - 3. Naval systems engineering
 - 4. Operational logistics
 - 5. Personnel management
 - 6. Financial management
 - 7. Education and training management
 - 8. Command and control
 - 9. Computer technology

TITLE: INTELLIGENCE OFFICER (163X)

- I. Job Description. The Office of Naval Intelligence (ONI) employs two main types of naval officers. The first is the active duty, regular naval officer (USN). Their designator is 1630. The second type of intelligence officer is the reserve officer (USNR) whose designator is 1635. All intelligence officers, despite their different programs of origin, work together providing the fleet with critical intelligence and assessments of other fleets.
- II. Qualifications
 - A. Quality academic background, with special emphasis on communications, computer and analytical skills. Courses that are writing-intensive and require analytical work are especially useful in developing intelligence professional abilities.
 - B. Basic literacy in scientific processes and mathematics. At least one year of advanced math (calculus and above) and laboratory science desired to develop fundamental technical understanding.
 - C. Demonstrated degree of self-confidence, capable of presenting information to large groups.
 - D. Ability to work in a group environment, as well as independently.
 - E. Most typical degree plans include political science, foreign affairs, international relations and computer science. It is also desired that these students have backgrounds in computer science/systems management and science/engineering fields to support community technical intelligence and systems management requirements. Foreign language capability is considered a plus, but is not a key requirement for 1630 accessions. Those language skills considered useful to the community include Mandarin Chinese, Arabic, Farsi, Russian, Spanish, Japanese, French, German, and other specified languages.
- III. Career Opportunities
 - A. First tour: All 1630/5 officers go to an operational billet.
 - B. Second/third tour: Officers are assigned to shore tours, either in CONUS or overseas. Types of billets include OPINTEL, joint duty, instructor duty, analytical billets, or grad school.
 - C. Senior tour: Equivalent to a department head tour for other communities.
- IV. Educational opportunities. Continued education is of paramount importance in the intelligence community. It is possible to receive graduate education at the Naval Postgraduate School in such areas as national security affairs and space systems operations. There are billets available at the Defense Intelligence College in Washington, D.C. The officers attending the DIC can obtain a MS in strategic intelligence (MSSI) by meeting the PGIP requirements and completing either a thesis or two special research seminars. Following completion

of postgraduate work at either NPS or DIC, an intelligence officer will obtain a subspecialty in one of the following: joint intelligence, naval intelligence, national security affairs, financial management, manpower and personnel management, space systems operations, or computer systems technology.

TITLE: JUDGE ADVOCATE GENERAL'S CORPS (JAG)

I. Job Description. A JAG officer provides legal advice and services to client commands, as well as active and retired service members and their dependents.

II. Qualifications

A. Eligibility

1. An applicant must be a United States citizen of good moral character.
2. An applicant must not have reached 35 years of age at time of commissioning and commencement of active duty.
3. An applicant must meet the physical requirements for appointment in the JAG Corps.
4. At the time of appointment, an applicant must be a graduate of a law school accredited by the American Bar Association and be admitted to practice before a federal or state court.

B. Education and training

1. Directly appointed officers commence their extended active duty by attending an officer indoctrination training course of approximately six weeks in length. Following the completion of this school, directly appointed officers attend Naval Justice School, which is also located in Newport, RI. This course of instruction is nine weeks in length. Upon completion of these schools, Navy judge advocates report to their first duty stations.
2. A judge advocate interested in earning an LLM degree may, if selected, study at an approved law school of his/her choice for one year while earning his/her normal salary and with all education expenses except books paid by the Navy. This program incurs an additional three-year commitment. Postgraduate education is also available at the Naval War College, the Army JAG School, and civilian universities.
3. The Law Education Program provides an opportunity for commissioned officers of the Navy and Marine Corps to attend American Bar Association accredited law schools for education not to exceed 36 months.

By statute, not more than 25 officers may be assigned under this program in any single fiscal year. To be eligible to apply for this program, an applicant must be a citizen of the United States serving on active duty in commissioned service, hold a baccalaureate degree from an accredited institution, be in pay grade O-3 or below, have served on active duty for a period of not less than two years nor more than six years (in officer or enlisted status) as of

the time law education is to commence under orders to this program, and be able to complete 20 years of active service as a commissioned officer before their 55th birthday.

III. Career Opportunities

- A. Judge advocates will normally be assigned to a naval legal service office, either in the United States or overseas. Also assigned to staff's, BATGRU's, etc. The greatest experience may be expected in criminal law (that is, pre-trial investigations, courts-martial as trial and defense counsel, and courts-martial appeals).
- B. Directly appointed officers receive service credit (for promotion purposes only) up to three years during the period they attend law school while not in a commissioned status. This service credit enables these officers to be appointed as lieutenant junior grade. Promotion to a full lieutenant can be expected.

TITLE: U.S. NAVY MEDICAL DEPARTMENT (MEDICAL CORPS, DENTAL CORPS, MEDICAL SERVICE CORPS, AND NURSE CORPS)

- I. The mission of U.S. Navy medicine is to ensure the best possible health and medical support of the Navy and Marine Corps personnel and their dependents. This support includes multiple areas of Naval medicine, including, but not limited to, disease control, direct clinical care, research, and executive management and leadership.
- II. All Medical Corps officers have the dual responsibility of being both a health care deliverer and a professional military officer.
 - A. Medical Corps (physicians). Midshipmen may enter the Medical Corps through the School of Medicine at the Uniformed Services University of Health Sciences (USUHS) or through the Armed Forces Health Professional Programs, both of which are very competitive. It is expected that a midshipman have a minimum GPA of 3.0, with solid grades (A or B) in calculus, physics, biology, and chemistry, and strong MCAT scores.
 - B. Nurse Corps. Midshipmen who major in nursing comprise the third largest source for the Nurse Corps.
 - C. Dental Corps. Midshipmen would gain entrance into the Dental Student Program or via the Armed Forces Health Professions Scholarship Program (AFHPSP).
 - D. Medical Services Corps.

TITLE: NAVAL OCEANOGRAPHER (1800)

I. Purpose

- A. To support naval strategy and tactics by applying the sciences of oceanography, meteorology, mapping, charting, and geodesy to naval operations.
- B. To assess/predict the impact of the environment on naval platforms, weapon systems, sensors and naval operations.

II. Qualifications. The oceanography community accesses restricted line officers in three ways:

- A. Lateral transfer of warfare-qualified unrestricted line officers (LCDR and below).
- B. Through the ocean-option program, in which ensigns are first assigned to sea duty with a 116X designator to earn a surface warfare qualification prior to redesignation to the oceanography community.
- C. Direct commissioning from OCS, NROTC and the Naval Academy (only possible if found NPQ for URL duty). Undergraduate education in meteorology, oceanography, geodesy, astronomy, or technically oriented degrees in mathematics, physics, geophysics or engineering is preferred. Oceanographers are expected to successfully complete a Master of Science degree in an oceanographic discipline with most of the education being received from the Naval Postgraduate School prior to promotion to commander.

III. Career Opportunities

- A. First tour. A newly assigned officer can expect to be assigned to a major regional Meteorology and Oceanography Center (METOC), facility or product production center which will offer a general familiarization tour to the community and expand his/her operational knowledge base. The second tour will either be a leadership tour as officer in charge of a METOC detachment, a sea tour as part of a Mobile Environmental Team or assignment as a division officer on an amphibious assault ship. A professional goal of the junior officer is to become warfare qualified prior to going to Naval Postgraduate School, which normally occurs between the fourth and seventh year of service.
- B. After graduate education, the officer may expect to go back to sea as a METOC officer on an aircraft carrier or battle group staff. In general, there will be several sea tours and at least one opportunity for overseas duty.
- C. Duties embody application of the principles of meteorology, oceanography and mapping, charting and geodesy to fleet operational problems and system performance. Fleet assignments also broaden operational experience and enhance promotability.

- D. There are 240 billets for O-4 and above requiring a general, broad-based understanding of the meteorological and oceanographic environments and their impact on naval operations. There are a select number (10) of doctoral level billets available for more specialized personnel.

TITLE: SPECIAL DUTY PUBLIC AFFAIRS (165x)

I. Job Description

- A. Advises senior Navy leadership on all matters relating to public affairs.
- B. Interfaces with media organizations.
- C. Informs and educates the public regarding Navy operations and policies.
- D. Informs and educates Navy personnel, their families, reservists, and civilian employees.

II. Qualifications

- A. Prior public affairs experience and a degree in journalism or mass communications are an advantage, but not required.
- B. The best PAOs are generalists, with a broad exposure and balanced experience in a variety of billets.
- C. Virtually all officers become PAOs through lateral transfer from another community. Each year, 10-15 people are selected by a board. Occasionally, OCS will provide a direct accession.

III. Career Opportunities. The average PAO can expect to serve in seven to eight billets during a typical career. Billets include CVs, CVNs, and numbered fleets afloat, direct fleet support, Washington, D.C., joint, overseas, and possible graduate education.

TITLE: SPECIAL OPERATIONS OFFICER (119X/114X if SWO qualified)

- I. Job Description. Special operations was created to preserve and develop essential perishable skills which either were not covered within the charters of existing communities, or for which those communities provided no viable career paths. It is broken into four main functional areas:
 - A. Expendable ordnance management (EOM). Involves conventional and special weapons handling, procurement, storage, transportation, and life-cycle management.
 - B. Explosive ordnance disposal (EOD). Involves field location/relocation, identification, rendering-safe, recovery, and exploitation for intelligence of all U.S. and foreign ordnance that has been placed and poses a threat. EOD provides support to the FBI, Secret Service, and State Department as needed. EOD personnel also provide diving services to the fleet as needed.
 - C. Diving and salvage (D&S). Includes all aspects of diving and salvage, including operational D&S, research/development, training/education, and experimental diving. Provides opportunity for LCDR CO afloat in ARS 50 class ships.
 - D. Mine countermeasures (MCM). Formally added as fourth functional area in 1987. Includes billets aboard MHC and MCM ships, and at major shore staffs (OPNAV, MINEWARCOM, TYCOM). Also provides opportunity for LCDR CO afloat.
- II. Career Opportunities. Unrestricted line career path through captain. Core training consists of Basic Diving Officer Training at NDSC, Panama City, FL, followed by Surface Warfare Officer School in Newport, RI. Officers will then serve a 30-month tour at sea in ARS, MHC, MCM or MCS class ships. During their initial sea tour, the officers are expected to qualify as OOD, EOOW, SWO and, ultimately, as a special operations officer (1140). Upon completion of their initial sea tour, all officers will attend Phase II of core training, which consists of explosive ordnance disposal training at Eglin AFB, FL. Successful completion of EOD school is required to continue on as a special operations officer. Officers who do not attain this qualification have the opportunity to lateral transfer to another designator where they can remain competitive for promotion. As an 1140's career progresses, he/she will alternate between sea and shore duty in two of the functional areas that best meet both personal desires and the needs of the Navy.
- III. Educational Opportunities. The opportunity for advanced education does exist in the special operations communities, as it does in all others. However, unlike special warfare officers, special operations officers spend alternating tours ashore and afloat. This forces special operations officers to attend PG schooling in a pattern similar to the surface warfare community. Service college participation is also possible in the later years.

TITLE: SPECIAL WARFARE OFFICER (118X/113X)

I. Job Description. Special warfare officers are members of the smallest unrestricted line community and perform a varied number of tasks, including: hydrographic reconnaissance, land and underwater demolitions, weapons training, small unit tactics, land reconnaissance, and combat-diving training with selected types of SCUBA.

II. Qualifications

- A. Be a male U.S. citizen.
- B. Be 28 years of age or less, as of the date the application is received at BUPERS.
- C. Prepare an application and meet all the requirements as set forth in Naval Military Personnel Manual (Article 1410380) and U.S. Navy Medical Manual (MANMED) (Article 15-36).

III. Career Opportunities.

- A. Training. Initial training for SPECWAR candidates takes place in Coronado, CA. The Basic Underwater Demolition/SEAL (BUD/S) training is a six-month course designed to provide basic physical and technical skills essential in naval special warfare. Successful completion of BUD/S signifies that the candidate has the skills required to assign him to a Sea Air Land (SEAL) Team or SEAL Delivery Vehicle (SDV) Team in either Coronado, CA, or Little Creek, VA.
- B. First operational phase. The first operational phase is normally about five years and is split into two tours. The candidate may have both tours in SEAL teams or, ideally, have one in a SEAL team and one in a SDV team. Training continues in this phase as much of the basic knowledge possessed by the candidate is expanded by advanced instruction. Included in this training is the basic parachute training course; advanced weaponry; SDV training; arctic, jungle, or desert operations; foreign languages; and small boat operations. It is in this phase that the candidate will prove his/her abilities as a special warfare officer. Usually six-to-nine months after reporting to his/her first team, the candidate will be recommended for designation as a special warfare officer, thereby changing his/her designator from 118X to 113X and, thus, earning the right to wear the special warfare pin.
- C. Duties. During these early tours, the SPECWAR officer will work in support departments (diving, weapons, or air ops). Five or six years into the tours, it is expected that all SPECWAR officers will achieve a subspecialty (naval intelligence, political-military affairs, etc.). As an alternative to formal education, staff billets with NAVSEA Systems Command or Joint Special Operations Command may be assigned. At the eight-year point, the second operational phase will begin. During this phase, the goal is to serve as operations officer or staff duty at the Naval Special Warfare Groups/Units, the Naval SPECWAR Com-

mand, a naval special warfare detachment commander, or on a fleet or amphibious squadron staff. Attendance at a staff or junior service college is possible. At the LCDR level, one's career is basically directed by previous assignments. For those with time in the DC area, an operational command is preferred, and vice versa. Following this tour, XO or CO of a team is recommended. From there on up, the majority of a SPECWAR officer's billets are on major commands of Naval Special Warfare Groups, the Naval Special Warfare Center, and SEAL Team Six.

- IV. Educational Opportunities. As noted above, the opportunity for advanced education does exist in the special warfare communities, as it does in all others. Considerable time may be spent ashore in staff or command billets where it would be quite feasible for officers to attend PG schooling. Service college participation is also possible in the early years. This community offers a diverse lifestyle for those who enter its ranks.

TITLE: NAVAL SUPPLY CORPS OFFICERS (310X)

- I. Job Description. As the Navy's principal seagoing staff corps, the goal of the Supply Corps is to provide logistical and operational support to the fleet in many areas of expertise, such as finance, food service, acquisition/contracting, retail, operations analysis and supply management. The Supply Corps trains its officers to combine operational and business management practices which enable them to acquire and support today's Navy with current and future inventory requirements to maintain the high level of readiness that is needed in today's always changing world.
- II. Qualifications
 - A. Supply officer responsibilities
 1. Supply management. Includes inventory requirements, determination, acquisition of supplies, transportation, storage and inventory control of repair parts and consumables.
 2. Business/Administrative management. Includes information systems, petroleum management, transportation logistics management, internships and an array of subspecialties unique only to the Supply Corps.
 3. Direct personnel support. Includes management of Navy shipboard and shore-based food service facilities, disbursing centers and other retailing operations.
 - B. Education and training
 1. Navy commissioned officers who are among the few selected for designation as Supply Corps officers will attend the Navy Supply Corps (BQC) for a period of six months, covering a myriad of subjects in retail operations, food service, disbursing, qualitative management, supply management, and leadership and management. The mission of the Navy Supply Corps School is to train students in the duties afloat and ashore to successfully perform as a naval officer in a variety of functions.
 2. Supply Corps officers, after completion of their initial duty assignment and independent department head tour, are then eligible to pursue a graduate degree at the Naval Postgraduate School in Monterey, CA, or civilian university.
- III. Career Opportunities
 - A. Supply Corps officers are foremost naval officers whose primary goal is superior service to the fleet. Therefore, sea duty is a vital element in developing an effective Supply Corps officer. In turn, a successful sea tour can result in other opportunities, including internships, independent tours, and other challenging assignments.

- B. Supply Corps School graduates are given their first assignment on a seagoing command or overseas as an assistant to the supply officer and given responsibilities in one or more of the following areas: stores, disbursing, and/or food services with annual budgets well into the million dollar range. The more senior lieutenant and above are eligible for independent tours onboard a submarine or amphibious command to allow for diversity and develop other expertise.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 16

HOURS: 1.0

TITLE: Basic Leadership and Personal Leadership Qualities

I. Learning Objectives

- A. The student will comprehend the importance of strong character development as it relates to the moral and ethical responsibilities of a leader and the principles of effective leadership.
- B. The student will know and analyze the qualities/traits that he/she possesses and areas that can be improved.
- C. The student will know how leadership characteristics, including loyalty, honor, integrity and courage (moral and physical), are exhibited by successful leaders, and why they are important.

II. References and Texts

A. Instructor references

- 1. Naval Leadership, pp. 13-15, 23-26, 34-36, 38-43, 49-63, 83-84, 108-112, 126, and 129-132
- 2. NROTC Leadership and Ethics Student Guide (optional)
 - a. Articles:
 - (1) "Important Qualities of Good Leaders" by VADM William Lawrence, USN (Ret), p. 7
 - (2) "The World of Epictetus: Reflections on Survival and Leadership" by VADM James Bond Stockdale, USN (Ret), p. 11
 - b. Handout: "Leadership Qualities and Characteristics," p. 19
- 3. Ethics for the Junior Officer
- 4. "Frogs" Case Study (attached)

B. Student texts:

- 1. "Frogs" Case Study (attached)
- 2. Locally reproduced handouts of selected case studies

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Computer/projection system

- C. Course Coordinator CD-ROM
- IV. Suggested Methods and Procedures: Method options
 - A. Lecture
 - B. Discussion
- V. Presentation
 - A. Ask the midshipmen to identify the qualities and characteristics they consider to be required of a leader. Write these on the blackboard.
 - B. Use a fitness report as an example of the various leadership traits needed to succeed as a naval officer.
 - C. Discuss and define the 13 key qualities and traits listed as follows:

Honor	Courage
Commitment	Tact
Simplicity	Self-Control
Loyalty	Duty
Drive	Technical Competence
Compassion	Initiative
Self-Discipline	

These, even with those additional traits listed below, are not all-inclusive. Stress that this is not a "cookbook" lesson to leadership (i.e., 1 part integrity to 1 part judgment, etc., doesn't equal a perfect leader). This lesson merely helps define and makes midshipmen aware of the component parts of the concept called "leadership."

Analytical Ability	Personal Behavior
Military Bearing	Forcefulness
Speaking/Writing Ability	Self-improvement
Setting the Example	Positive Attitude
Enthusiasm	Leading by Example

Discuss how a lack of any one of these qualities can hamper one's full leadership potential.

- D. Discuss how a leader's effectiveness is stunted when any of the above qualities are not implemented.
- E. Spend some extra time defining integrity and its components. Stress to the students that no absolute definition exists. Touch on the Honor Code and whether the Code promotes honesty and integrity effectively.
- F. Discuss self-discipline and its components. Being an officer is a 24-hour-a-day responsibility and often requires putting this responsibility in front of personal desires. Failure to exercise self-discipline can cost lives. Explain the importance of

carrying out a superior's orders even when they are not popular with the officer, his or her peers, or subordinates.

- G. Discuss the naval officer's need to be flexible. The daily routine of an officer changes almost continuously, and the officer must be able to adapt.
- H. Explain how an officer cannot effectively lead subordinates if he/she cannot discipline him/herself. The officer must set the example. If he/she doesn't, subordinates will feel as if more is being asked of them than the officer is willing to ask of him/herself. Consequently, the troop's morale will be low, appearance will be sloppy, and performance will likely be poor. Self-discipline can be illustrated by:
 - 1. A neat appearance
 - 2. Timeliness (work due, watches, appointments, etc.)
 - 3. Not being the first person on liberty
 - 4. Carrying out unpopular orders
 - 5. Volunteering for unpopular jobs
 - 6. Being physically fit
 - 7. Planning ahead
 - 8. Setting goals
- I. Discuss how the midshipmen can develop and improve their self-discipline. First, a leader must know him/herself. The midshipmen need to determine their faults and seek improvement. Other steps include:
 - 1. Setting goals and striving to accomplish them
 - 2. Developing a personal ethic code and living by it
 - 3. Reading books in leadership and psychology
 - 4. Delegating authority
 - 5. Living within their means
- J. Discuss physical and mental stamina and how few individuals push themselves to their limits. In the military, an officer will have long, tiresome days where stamina and self-discipline are required for mission accomplishment. Laziness in an officer can only beget laziness in subordinates. Physical conditioning and keeping the mind busy can increase stamina and delay fatigue.
- K. Relate the qualities and characteristics to the idea of self-improvement and how they can positively change their leadership style and quality of life.

- L. Transition to leadership by example (i.e., how these qualities and characteristics will be observed by their troops; how their quest for self-improvement can influence their troops; how "ship, shipmate, self" is a practical application of leading by example).
- M. Read and discuss the attached case study.

Case Study -- "Frogs"

A NROTC unit and its battalion commander (BNCO), who holds several personal awards and is highly regarded by students and staff alike, was in the process of preparing for its semi-annual personnel inspection. The new BNCO, long recognized for his razor sharp military bearing and appearance, made it known to all hands that he expected strict attention to detail and would hold each company commander personally accountable for achieving the set standard.

What kind of atmosphere is the BNCO building?

The new BNCO was very involved in all aspects of battalion activities, never asking other midshipmen to do something unless he was willing to do it as well. He was highly respected by all midshipmen, but was often feared because of his consistently high standards placed not only upon himself, but on those with whom he worked. The new BNCO often conducted spot "checks" on various items within the battalion, and while very supportive, was also quick to seek improvement on items not meeting grade. One minor item to be accounted for (there are no minor items in a legitimate supply system, however) was the lowly frog (used to hold uniform hardware pins securely in place). It is an item costing less than a cent, but one that is vital to a person in uniform. If a frog does not securely hold an item in place or does not hold at all, it can cause serious discomfort and embarrassment to the midshipman.

On the day of the personnel inspection, the BNCO came to both the Alpha and Bravo Company commanders. Only the Alpha Company commander was able to truthfully answer that his company had all the frogs that it was supposed to have.

What was wrong?

During prior conversations with company commanders, platoon leaders and individual midshipmen about the status of frogs, the BNCO found out that the picture was bleak -- back orders were more than six months old.

During his regular contacts, the BNCO had asked company commanders, platoon leaders, and individual midshipmen about the status of frogs in his company, platoon, or among his individual equipment. Everyone was in short supply, and the system wasn't responsive when it should have been. Frogs were an item of short supply because the contracts for ordering them were not a high-priority item among professional supply officers, who were more concerned with ordering big-ticket items. But to the midshipman in ranks, the frog was a necessity.

On the day of the inspection, the Alpha Company commander knew that he was ready and felt that the possession of all the necessary frogs by each midshipman in his company would reflect well on his personal leadership.

What happened?

Knowing that his company would be inspected thoroughly and fearing a personal (possibly embarrassing) reprimand from the BNCO, the Alpha Company commander went to his contemporaries at the other two ROTC units on campus and

persuaded them to lend him their working frogs for his company's use during the inspection. He promised to return them after the inspection.

What could happen?

On the day of the inspection, the BNCO found that, to his surprise, Alpha Company members did have all the frogs they were supposed to. The BNCO caught the company commander with the question: "You borrowed them in anticipation of my inspection, did you not?" The latter admitted that he had.

The BNCO said further, "When I am inspecting, I am not just inspecting an individual company, I am inspecting the entire battalion and the entire program. If you willfully cover up the ineptness of the supply system, you are not demonstrating loyalty. As a matter of fact, your cover-up reflects worse on yourself than would the lack of the frogs. I know the problems of the supply system and realize that a lack of frogs does not reflect unfavorably on you or your unit. Your attempt to grandstand and look good personally, however, reflects adversely on your professionalism and professional loyalty. You knowingly or unknowingly could have contributed to my making a bad decision based on the faulty information that you supplied."

The BNCO further said to the Alpha Company commander: "You have a great future in front of you, perhaps, but I don't think it is in my battalion staff." The company commander later resigned his battalion billet. The words of the BNCO spread throughout the battalion like wildfire. A valuable lesson was demonstrated and communicated to the leadership of the battalion.

Was there any message sent about the BNCO's leadership?

There is no such thing as a legitimate lie to one's self, one's senior, or one's country. That is one concept you embrace when you accept a commission.

Discuss how this scenario relates to leadership qualities and personal ethics. Was this a command run through use of fear? Does such a climate encourage unethical behavior? Does such a climate excuse unethical behavior?

*As a side note, if you think frogs are silly examples, try to wear your uniform **properly** without any.*

NOTE: The theme of this case study is modeled after Issue #29, "The Canteen Corks," from Ethics for the Junior Officer.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 17

HOURS: 2.0

TITLE: DON Standards and Policies

I. Learning Objectives

- A. The student will comprehend what Navy Core Values are and how they serve as the basis for decision making and ethical behavior.
- B. The student will comprehend the personal and organizational benefits of having strong core values and how these values contribute to the readiness of the Navy and Marine Corps.
- C. The student will comprehend the relationship of Core Values to the role and moral and ethical responsibilities of a naval leader.
- D. The student will know the purpose of discipline in the military.
- E. The student will know the various traits of an effective leader.
- F. The student will comprehend how personal ethics relate to the effectiveness of a leader.
- G. The student will comprehend the major principle of the Code of Conduct and be able to apply it to a leader's role in a Prisoner of War situation.
- H. The student will comprehend the importance of the Sailor's Creed to the conduct of both officer and enlisted personnel.

II. References and Texts

A. Instructor references

- 1. The Naval Officer's Guide, Chapter 2
- 2. The Bluejacket's Manual, Chapter 4
- 3. Division Officer's Guide, Chapter 6
- 4. Case studies from Ethics for the Junior Officer: Selected Cases from Current Military Experience (or other available case studies)
- 5. Department of the Navy Ethics website, "The Ethics Compass," at <http://ethics.navy.mil>
- 6. OPNAVINST 3120.32 (Series), "Standard Organization and Regulations Manual (SORM) of the U.S. Navy"

7. FY-00 GMT Topic 3-2, "Developing and Building Trust"
(Available at:
<https://www.cnet.navy.mil/CNET/GMT/ig32.doc.>)
8. SECNAVINST 5370.2, "Standards of Conduct and Government Ethics"

B. Student texts

1. The Naval Officer's Guide, Chapter 2
2. The Bluejacket's Manual, Chapter 4
3. Locally reproduced handouts of selected case studies

III. Instructional Aids

- A. Handouts and case studies
- B. Course Coordinator CD-ROM
- C. Computer/projection system

IV. Suggested Methods and Procedures

- A. Guided discussions with heavy emphasis on student participation. Knowing what core values and leadership traits are is important, but causing the student to internalize these traits is the real goal.
- B. This lesson contains case studies and questionnaires that must be completed before class. There is a pre-questionnaire that needs to be completed before the first hour and case studies that must be read before the second hour. The student reading assignments should be completed prior to the first hour and, more than anything, will help get the student into the right frame of mind for these discussions.
- C. For case studies, the instructor may use choose from any of the 121 "Issues" presented in Ethics for the Junior Officer: Selected Cases from Current Military Experience or other available case studies to illustrate a point relating to this lesson.
(Instructor is given latitude in selecting these case studies based upon personal experience, current Navy climate and the amount of discussion time available.)
- D. Helpful hints
 1. This is not a "hug me" drill. Get at what the class is really thinking. Drive those thoughts to the top so that each individual becomes aware of sensitivities, signals sent, and false impressions.
 2. Fear: Making choices based on fear causes an erosion of values. (The instructor may use the "Frogs" Case Study from Lesson 16 as a discussion reference.) What motivates individuals to make decisions? One may find several

recurring themes. Emphasize to the students that poor choices are often made because of fear.

- a. Fear the system would not support them or the system would not react appropriately.
 - b. Fear they might get a peer or senior into trouble.
 - c. Fear they might be "blackballed" or excluded from the hot running group.
3. Middle-of-the-road: Should the subject of religion and religious heritage arise, take the middle-of-the-road approach. Everyone brings their religious heritage with him or her, whatever their background. Navy Core Values encompass the values expected of a Navy member.
 4. Affecting outcomes: "What can I do?" is a difficult question requiring an answer during this lesson.
 - a. Recognize and reward the right kind of behavior when so empowered.
 - b. Work on creating positive peer pressure.
 - c. Know your people and be sensitive.
 - d. Think! Are you sending the right signals by your actions?
 - e. Become involved and communicate up and down the chain of command.

V. Presentation

- A. Opening remarks. (Presented by CO/XO, if possible.)
 1. The nation and the Navy are facing many difficult challenges.
 - a. Downsizing
 - b. Reorganization
 - c. Budget reductions
 2. Another part of the challenge is a reduced and changing work force that must "do more with less."
 3. To meet these challenges, we must work to use our most valuable resource -- our people -- to their maximum potential.
 4. We will have a diverse work force with more people from different educational, cultural, and religious backgrounds.

5. Your challenge will be to create a work environment in which all your people can work to their maximum potential -- free of bigotry and harassment.
6. Without this environment, teamwork, cooperation and mutual respect cannot flourish. Do the right thing, and set the right example. Helping and coaching junior people to model this behavior is the job of leaders.
7. The key to creating an environment in which there is trust is leadership and a set of core values -- which establish the guidelines for conduct, behavior, and decisions 24 hours a day. They define the Navy's expectations for our behavior and for our success. We have the responsibility to set the standards and to provide the role model.
8. We must learn from the challenges and tribulations of others to not repeat their mistakes. We must be willing to learn, to adjust, and to be proactive in communicating and living the values of the organization.

B. Core Values (Presented by instructor.)

1. We are in a time of change. The Navy/Marine Corps mission was redefined in the document, Forward...From the Sea. Forced downsizing absolutely requires that each individual perform at maximum potential. Toward that goal, the CNO Executive Steering Committee adopted honor, courage, and commitment as the Navy's Core Values.
2. Discuss the purpose of core values. Briefly summarize the Navy's Core Values and how they apply to and affect the way in which a service member lives his/her life.
3. The goal of the Core Value initiative is to emphasize the Navy's commitment to all of its people in terms of high standards of honor, courage, and commitment. This will be accomplished through:
 - a. Education: To make the United States aware of the Navy's renewed emphasis on Core Values.
 - b. Reinforcement: Will come at mid-career and senior levels and will focus on establishing an environment that rewards the right kind of behavior and creates a positive working environment.
 - c. Accountability: Will be ongoing; accountability for ourselves, as well as seniors holding others accountable. Accountability focuses on leadership by example, grievance, redress, and command assessment.
 - d. This is not a "watchdog" policy on your shipmates or seniors, but rather an internal check on how we conduct ourselves in our everyday business.

4. We must do everything we can to create a climate that enhances esprit de corps, self-esteem and teamwork. Anything that detracts from this must be eliminated. What detractors are there? Possible answers:
 - a. Gun-decking
 - b. Fraternization
 - c. Racism
 - d. Sexual harassment
5. What does this say about society? About the Navy?
6. What kinds of behavior have you seen displayed that suggest some individuals within our society have diminished values? Are these problems also found in our Navy? Are these problems or merely symptoms of larger cause? Possible answers:
 - a. Sexual harassment
 - b. Racial discrimination
 - c. Financial irresponsibility
 - d. Cheating
 - e. Stealing
7. What might be some of the root causes for the lack of values within an individual or a community?
8. Make the point we want to change the image we see in the mirror.
9. Discuss why Navy personnel are held to a higher standard. The reason has to do with our value system. Our first exposure to values comes from the family. What types of values did you learn as a child? These values are part of your individual values.
10. As you matured, you learned about our history and the value system upon which our country was founded. These values are associated with citizenship. They, too, become part of your individual values through practice and time. Corporate values are those associated with an organization, company, or, in our case, a military service. What are some foundational resources within the Navy community that state core values? When we join the Navy, we buy-off on a set of values -- the corporate values associated with our military service. These are the Navy Core Values of honor, courage, and commitment. Individual values line up with Navy Core Values.
 - a. Honor: A keen sense of ethical conduct.

- (1) What do the terms integrity/ethics/and honesty mean to you?
 - (a) Integrity: Firm adherence to a code of espoused values.
 - (b) Ethics: Conforming to accepted professional (or personal) standards of conduct.
 - (c) Honesty: A fairness and straightforwardness of conduct.
 - (2) What is responsibility?
 - (a) Moral, legal, or mental responsibility. (Moral = of or relating to a set of principles of right and wrong in behavior.)
 - (b) Reliability and trustworthiness.
 - (3) What are some examples of situations that require integrity? [Possible answers: Interacting honestly with coworkers and superiors; completing jobs thoroughly (no cutting corners); accepting responsibility for actions; demonstrating the moral courage to speak up when needed; role modeling.]
 - (4) These are desired attributes for all naval officers, as well as all naval personnel.
- b. Courage is the mental or moral strength to resist opposition, danger, or hardship.
- (1) What is loyalty? Faithful to a cause, ideal, custom, or government.
 - (a) Where is your final loyalty as an officer? The Constitution. Reminder: The chain is only as strong as the weakest link.
 - (b) What happens when loyalty is misplaced? The greatest good for the greatest number is not represented. Loyalty to the chain of command when that chain of command fails to represent Navy Core Values is misplaced loyalty.
 - (2) What is patriotism? Selflessness for country.
 - (3) What is valor? Strength of mind or spirit that enables one to encounter danger with firmness.

- (4) These are the desired attributes for all naval officers, as well as all naval personnel.
- c. Commitment is the state of being obligated or emotionally impelled.
 - (1) What does commitment mean to you? (Possible answers: Pride of workmanship; integrity; looking/acting in a manner appropriate for the job.)
 - (2) What is competence? Having capacity to function or develop in a particular way. Includes technical, as well as leadership capacities. What can we do to increase our competence? (e.g., Additional formal training, OJT, working with a mentor, etc.)
 - (3) What is teamwork?
 - (a) Work done by several, each doing a part, to increase the efficiency of the whole.
 - (b) What values affect teamwork? Values affect all aspects of individuals and must affect teams, since individuals are what teams are made of.
 - (4) Why is concern for people important?
 - a. It reinforces personal worth of people; helps create a quality environment where their contributions count; is an integral component of teamwork.
 - b. Why is it important to have? Creates an environment where effectiveness and efficiency can result.
 - c. These are desired the attributes of all naval officers, as well as all naval personnel.
- 11. The Navy's Code of Conduct is most often brought up in reference to Prisoners of War and the importance that code was to them in their ability to resist capture, torture, information divulgence, etc. The students should be able to recite the Code of Conduct verbatim. A short group discussion on the history and importance of the Code, emphasizing how it affects Naval leaders today, is appropriate. While this lesson will not discuss the conditions encountered in combat or a prisoner of war setting, it is important for the midshipmen to understand that the scope of the Core Values extends to combat conditions, including prisoner of war situations. (The Code of Conduct is provided below, but can also be found in The Bluejacket's Manual.)

U.S. Military Code of Conduct

Article I: I am an American fighting in the forces which guard my country and our way of life. I am prepared to give my life in their defense.

Article II: I will never surrender of my own free will. If in command, I will never surrender the members of my command while they still have the means to resist.

Article III: If I am captured I will continue to resist, by all means available. I will make every effort to escape and aid others to escape. I will accept neither parole nor special favors from the enemy.

Article IV: If I become a prisoner of war, I will keep faith with my fellow prisoners. I will give no information or take part in any actions which might be harmful to my comrades. If I am senior, I will take command. If not, I will obey the lawful orders of those appointed over me and will back them up in every way.

Article V: When questioned, should I become a prisoner of war, I am required to give name rank, service number, and date of birth. I will evade answering further questions to the utmost of my ability. I will make no oral or written statements disloyal to my country and its allies or harmful to their cause.

Article VI: I will never forget that I am an American, fighting for freedom, responsible for my actions, and dedicated to the principles which made my country free. I will trust in my God and in the United States of America.

12. The Navy's Core Values are embodied in the Sailor's Creed, which was developed to add inspiration and purpose to all naval personnel alike. Admiral Mike Boorda, Chief of Naval Operations at the time, rewrote the Sailor's Creed in 1994, just a year after it was introduced. His changes, such as substituting the word "Navy" for "Bluejacket," were designed to create a creed that applied to all and foster a sense of unity. Instructor should read the Sailor's Creed in class and ensure the students commit it to memory. (The Sailor's Creed is provided below, but can also be found in The Bluejacket's Manual or at http://www.nsgreatlakes.navy.mil/NRAC/posters/pages/creed_jpg.html.)
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Sailor's Creed

I am a United States Sailor.

I will support and defend the Constitution of the United States of America and I will obey the orders of those appointed over me.

I represent the fighting spirit of the Navy and those who have gone before me to defend freedom and democracy around the world.

I proudly serve my country's combat team with honor, courage, and commitment.

I am committed to excellence and the fair treatment of all.

- C. Divide students into groups of four or five and distribute case studies. Allow time for them to read and consider all of the elements in each case study.

*** * * HOUR TWO * * ***

D. Case Studies

1. Review material from hour one. Discuss any relevant issues brought up by the class. Break the class into the pre-assigned groups. Each group will discuss and determine responses to their case studies. One member of each group will then present his/her group responses from their case study to the rest of class. The presentation should last about five minutes and consist of the group decision making and reasoning. The instructor will assist in guiding the class in discussion; but this is student discussion, and they need to be prepared to conduct these presentations/discussions.
 - a. Case study goals
 - (1) Learn: Realize what Navy Core Values are and how they serve as the basis for your decisions and actions everyday.
 - (2) Think: Recognize when Navy Core Values are being compromised.
 - (3) Act: Do the right thing! (Ethics)
Internalizing the Core Values, so they govern how we live and act out our lives day to day.
 - b. The homework consisted of case studies that posed dilemmas. When it is hard to determine what action to

take in a given situation, this may be termed an ethical dilemma. The following three factors contribute to ethical dilemmas:

- (1) Conflicting values. (Ask the class for examples, such as loyalty to one group may create a situation where your honesty and loyalty to the service or country are compromised). What is the ethical solution?
- (2) Conflicting obligations. (Ask for examples, such as an obligation to be at your duty station may conflict with an obligation to your family or friends. Or an obligation to be at a NROTC function may conflict with an obligation to your peer group). Do personal ethics and professional ethics conflict?
- (3) Cost/Benefit tradeoffs. (Ask for examples.) How do cost/benefit tradeoffs relate to conflicting values or obligations? Does the benefit outweigh the risk?

c. Have groups present the responses to the case studies. Ask questions like:

- (1) Did everyone in the group feel the same?
- (2) In your case study, how did core values relate to the actions and outcomes?
- (3) Could the outcome have turned out differently?
- (4) Does the rest of the class agree? Why?

Note to the instructor: *If the instructor fails to bring out the elements of core values as they apply to the case, the value of the group exercises will be lost. Instructors must probe underlying issues associated with the case studies. For example, in case study #2, LT Smith submitted a false travel claim that resulted in receiving an additional \$800 from the government. This is a large sum of money to most midshipmen, and most would agree that LT Smith lacked values and good judgment. But what if the claim was only for an additional \$20 for a made-up taxi fare? Do the students still agree that LT Smith should be punished?*

Also discuss perception. Even if LT Smith didn't actually violate the law, the perception of wrongdoing will have the same effect as if there were substantiated wrongdoing. This perception is very valid and is especially significant if the "event" may discredit not only himself but his unit and the Navy as well.

E. Division officers are legally responsible for the well-being of their followers.

- F. Discipline: Training that develops self-control, character, and efficiency.
1. Comes from the Latin meaning, "to teach."
 2. Discipline aims to train and control a group of human beings for concerted effort to attain a common goal even under times of very high stress.
 3. Good discipline depends on the right attitude. Well-disciplined units do the right thing, because it's the right thing to do -- not because they have to.
- G. Qualities of a superior leader. *(The instructor may wish to refer back to Lesson 16 to jog the students' memories.)*
1. Takes initiative
 2. Follows through
 3. Demonstrates self-confidence
 4. Seeks information
 5. Plans
 6. Manages time efficiently
 7. Enforces high standards
 8. Promotes good working relationships
 9. Demonstrates concern for subordinates
 10. Is responsible
 11. Influences
 12. Communicates

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 18

HOURS: 2.0

TITLE: Followership/Knowledge Requirements/Case Studies

I. Learning Objectives

- A. The student will know the definition of followership and the role it plays in leadership.
- B. The student will know the qualities, behaviors, and principles of effective followership.
- C. The student will know the relationship of knowing oneself, one's job, and one's people to being an effective leader.
- D. The student will know how an effective leader encourages moral and ethical behavior, suppresses fear, and attends to a subordinate's needs.
- E. The student will know why cohesion and discipline are essential in any command, and how a leader can instill these essential concepts.
- F. The student will know the importance of enhancing technical, tactical, and professional knowledge.

II. References and Texts

A. Instructor references

- 1. Naval Leadership, pp. 44-48
- 2. Articles from the NROTC Leadership and Ethics Student Guide (optional)
 - a. "The Subordinate: The Art of Followership," by Sergeant First Class Michael T. Woodward, p. 25
 - b. "Effective Leaders Must be Good Followers Too," by G. Ronald Gilbert, p. 27
 - c. "What a Leader Must Know," p. 29
- 3. Case studies on followership from Ethics for the Junior Officer: Selected Cases from Current Military Experience, Issues 64 & 47

B. Student texts

- 1. Articles from the NROTC Leadership and Ethics Student Guide (optional)
 - a. "The Subordinate: The Art of Followership," by Sergeant First Class Michael T. Woodward, p. 25

b. "Effective Leaders Must be Good Followers Too," by G. Ronald Gilbert, p. 27

c. Handout: "What a Leader Must Know," p. 29

2. Locally reproduced handouts of selected case studies

III. Instructional Aids

A. Whiteboard/chalkboard

B. Computer/projection system

C. Course Coordinator CD-ROM

IV. Suggested Methods and Procedures

A. Method options

1. Lecture

2. Discussion

3. Case studies

B. Procedural and student activity options: Discuss the idea of followership, how effective followers make effective leadership possible, and how followership is a prerequisite to leadership. Review and discuss case studies in small groups.

V. Presentation

A. Have the class define followership. Possible answers:

1. The ability to place the health and well-being of an organization ahead of personal ambition.

2. The ability to have the same allegiance and loyalty up the chain of command as one would expect to flow down the chain.

3. The process in which subordinates recognize their responsibility to comply with orders of leaders and to take appropriate action consistent with the situation in carrying out those orders to the best of their ability.

4. The ability to know where and when to articulate one's views on an issue, and then to have the loyalty and the devotion to carry out the final decision on that issue.

5. A strict adherence to a personal code of conduct that upholds the standards and values of the organization.

B. Discuss why followership is important (i.e., followers are potential leaders; followers and leaders exhibit many of the same traits.) Point out that most leaders are also a follower to

someone. Refer to a chain of command diagram where a division officer is both a leader and a follower.

C. Points to consider and discuss:

1. Being an effective follower is not automatic. It requires cultivation just as leadership does.
2. Professionalism in followership is as important in the military service as professionalism is in leadership. Without loyal, dedicated followers, there can be no effective leaders.
3. Inherent to effective followership is a high degree of self-discipline.
4. Followers are potential leaders. The most effective follower is that individual whose goal is to be a future leader.
5. Followership is not a person, but a role. Leaders are also followers.
6. Effective followers share a number of essential qualities, such as:
 - a. Self-management/discipline
 - b. Commitment
 - c. Competence and focus
 - d. Courage
7. Can midshipmen develop themselves into effective followers?
 - a. What needs improving?
 - b. Where have they learned good followership?

D. Explain the importance of knowing human nature, especially during times of stress. An officer will constantly be dealing with seniors, peers, and subordinates, and attempting to motivate and understand them. This requires a thorough knowledge of human nature.

E. Discuss the emotions that a junior officer probably experiences on a first deployment: stress, fear, homesickness, loneliness, fatigue, low motivation. Explain how leaders must endure stress while simultaneously being concerned about the feelings, morale, and welfare of their subordinates. Leaders must have an influence over the emotions of followers.

F. Discuss ways to combat fear, low morale, and low motivation in the troops. Discuss the value of setting a positive and cheerful example, and how talking with subordinates and counseling will help instill a sense of confidence, self-worth, and self-respect.

A subordinate must believe that the leader sincerely cares. It's important to show kindness, empathy, and understanding. Ask the midshipmen if their squad leaders do a good job in this aspect. Share a personal experience of your own in dealing with subordinates.

- G. Ask the midshipmen how they combat stress. Mention constructive ways of dealing with stress, such as exercise, reading, sailing, participating in hobbies, talking to a clergyman or friend, going to a friend's house, or calling parents on the phone. Discuss the non-constructive ways, such as drugs and alcohol, excess sleep, or keeping feelings to oneself.
- H. Briefly discuss human needs, starting with basic physical needs and expanding to the higher needs. Mention how satisfaction of subordinates' higher needs will produce a more efficient, combat-ready unit.
- I. Review knowing one's job and being tactically and technically proficient. This concept was covered as one of the basic leadership principles. Ask the midshipmen if they have an ethical responsibility to know their job, especially when they have control over other peoples' lives and weapon systems.
- J. Distribute case studies for student review prior to the next class period.

*** * * HOUR TWO * * ***

- L. Assemble class into small groups of four to six people. Have each group review and discuss followership case studies and present significant points to the rest of the class. Invite open discussion from the rest of the class, but manage the time so that each group gets an equal time allotment.
- M. Review the significant points of followership/knowledge requirements for reinforcement.

**NAVAL RESERVE OFFICERS TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 19

Hours: 2.0

TITLE: Empowerment/Proactivity

I. Learning Objectives

- A. The student will comprehend how proactivity relates to effective leadership.
- B. The student will comprehend authority, responsibility and accountability and how they contribute to empowerment.
- C. The student will comprehend the concept of empowerment as it applies to leadership.
- D. The student will comprehend the relationship between empowerment and proactivity in effective leadership.

II. References and Texts

A. Instructor references

- 1. Naval Leadership, pp. 154-159
- 2. Ethics for the Junior Officer: Selected Cases from Current Military Experience
- 3. The Naval Officer's Guide, Chapter 8
- 4. "Proactivity" Case Study (attached)

B. Student texts

- 1. The Naval Officer's Guide, Chapter 8
- 2. Locally reproduced handouts of selected case studies

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Computer/projection system
- C. Course Coordinator CD-ROM

IV. Suggested Methods and Procedures

A. Method options

- 1. Lecture
- 2. Discussion
- 3. Case studies

- B. Procedural and student activity options: Discuss the concepts of empowerment and proactivity, how they relate to each other, and how both elements must be present for a leader to be effective. Review and discuss case studies in small groups.

V. Presentation

A. Proactivity

1. Have the class define proactivity. Possible answers include:
 - a. Proactivity means more than merely taking the initiative. Proactivity combines initiative with full responsibility while making things happen or acting to achieve unit goals without waiting for orders or supervision.
 - b. To be successfully proactive, one must be more than competent, fully knowledgeable and have the respect of their subordinates and peers. Successfully proactive people produce consistent quality regardless of circumstance. They accept the circumstances and conditions for what they are, and then make conscious decisions and take positive actions to achieve their unit's goals.
2. Being proactive is not:
 - a. Displaying pushy, obnoxious or aggressive behavior.
 - b. Defying orders or bypassing the chain of command.
 - c. Modifying responsibility or sidestepping accountability because of convenience.
3. Proactive vs. Reactive. Response is a key element in our development as leaders. Often our most difficult experiences produce the most essential components of our character, developing internal strength and ability to handle future challenges. *(The instructor should discuss examples from personal experience.)*
 - a. Reactive people often allow circumstances and conditions (the environment) to control their actions. Reactive people often lack foresight, get caught unprepared for a situation, and are forced into a course of action rather than choosing how to act.
 - b. Proactive people are value-driven, get the most out of the environment, and are able to see and choose their course of action. Proactive people are more than just positive thinkers. Proactive people face reality and then create a positive, goal-oriented plan of accomplishment.

- c. Proactive people use different language than reactive people. Examples:

<u>Reactive</u>	<u>Proactive</u>
I can not	I choose
I have to	I prefer
There is nothing I can do	I'll look at my options
I am what I am	I'll try a different way
I'm too busy	I'll adjust my priorities

More importantly, this language reveals the root attitude and commitment of that person.

- d. Reactive people focus on problems and circumstances over which they have no control. The result is that these circumstances grow and consume areas over which control could be exercised. Consequently, everything becomes a concern about which nothing can be done. This negative energy is detrimental to all personnel involved.

Proactive people put their energy and effort into the things they can do something about. They accept the uncontrollable events and work to take control of specific controllable circumstances and thus directly influence the outcome. The nature of this energy is positive, inviting and growing.

- e. Reactive people tend to absolve themselves of responsibility. It is safer and easier, but weaker to deny responsibility than face reality and admit the truth. Reactive people will endeavor to rationalize, justify and collect evidence of why they are not responsible. (Use examples, if available.)

Proactive people accept responsibility, hold themselves accountable, and become better for it. They do not make excuses, but rather seek understanding, so they can improve performance.

- f. The proactive person will acknowledge a mistake instantly, correct it, and learn from it. To not acknowledge, correct, and learn is self-deceptive and increases the significance of that mistake. This can lead to rationalizing, justifying, and then outright lying. Thus, the deception empowers the original mistake and hinders future actions.

B. Have the class define empowerment.

1. Two "forms" of empowerment:

- a. "Formal": The military service formally empowers a leader, enabling him to execute his billet or project assignment to its fullest. This empowerment comes in the form of command structure, authority,

responsibility, accountability, personnel, and support.

- b. "Informal": Relative to **leadership**, "informal" empowerment is the form of empowerment truly essential to effective leadership. This type of empowerment is much more than just being given authority. It is the **process** of ensuring the subordinate feels like a genuine part of and is responsible for the success of the organization. This "informal" empowerment is foundational and ensures that authority, responsibility and accountability are shared at all levels of the organization. Empowered workers at all levels know they will be listened to and taken seriously and are more apt to be proactive, action and results oriented.
- 2. Empowered people are not afraid to assume responsibility and be held accountable, because they are confident their actions will be worthwhile.
- C. Have the class define the relationship between empowerment and proactivity.
 - 1. A proactive leader, through skillful use of personal leadership qualities, can directly empower his subordinates. Leaders empower their people, not the positions, and establish an environment in which proactive involvement by all hands is strongly encouraged. Empowerment encourages proactivity.
 - 2. While empowerment is not necessarily a prerequisite for proactivity, a service member is much more likely to be proactive if he feels empowered. When the time comes for action, leaders and followers alike must then be proactive and take action. All the empowerment vested in a person is useless if that person fails to act.
 - 3. Empowerment and proactivity thus compliment each other. Empowerment encourages personnel to be proactive. Proactive personnel will be rewarded by being further empowered. When fostered carefully, both become valuable tools to a leader in building a positive, productive and growing command climate.
- D. Select and distribute case studies to the class for reading. The instructor may use the attached case study, select studies from the references listed, or develop ones from personal experience.

*** * * HOUR TWO * * ***

- D. Assemble the class into groups of four or five students.
- E. Review material from hour one and discuss any issues that may arise.

- F. Have the groups discuss the case studies among themselves. Allow them five to ten minutes per case study.
- G. Open up the discussion to the whole class and seek to define how proactivity and empowerment were evident in these case studies.

Case Study: Proactivity

A Navy O-6, in command of a U.S. Navy AOR, is present on the bridge during a conning along side evolution. Also present on the bridge is a LTJG (conning officer) and the usual mix of standard bridge watch personnel. During the evolution, the CO has the conn and is busy instructing another junior officer in proper closure techniques. During the course of the evolution, the young officer is having difficulty in adjusting ship's speed to set up proper closure on the other ship, and several attempts have resulted in overshooting followed by lagging. The CO, intent on assisting this struggling but determined young sailor, diverts more and more of his attention to instructing the officer.

What possible scenarios could result from the present situation?
(Group should brainstorm ideas.)

What followed? During the process of instructing the young sailor, the CO did not notice that his ship and the other ship had gradually drifted into converging courses. The LTJG (conning officer) did notice the imminent danger and attempted to gain the CO's attention. The CO said "just a minute." The LTJG again, more persistently this time, tried to inform the CO. The CO, more pointedly, said "just a minute."

What should the LTJG do? (Group should discuss possibilities.)

What followed: The next thing the CO heard was "This is LTJG Goodship, I now have the CONN, right 15 degrees rudder." The CO looked up from his "student's" work and realized that the situation was serious. Shortly after this, the danger now past, the CO ordered all members of that watch team, upon completion of the watch, to assemble in the wardroom.

What do you think happened?

Describe the CO's actions/debrief/award.

At the meeting, the CO recounted the sequence of events on the bridge and explained to the watch team exactly what had happened. Then, the CO, in front of the entire watch team, awarded a Navy Achievement Medal to LTJG Goodship for his actions on the bridge.

Discuss the type of leadership environment created by this commanding officer. Point out how the bridge crew was able to be proactive, because they felt empowered by the CO to take action.

**NAVAL RESERVE OFFICER TRAINING CORPS
INTRODUCTION TO NAVAL SCIENCE**

LESSON GUIDE: 20

HOURS: .5

TITLE: Basic Correspondence

I. Learning Objectives

- A. The student will know and be able to apply the rules of Basic Naval Correspondence.
- B. The student will know local expectations for correspondence.

II. References and Texts

- A. Instructor reference: SECNAVINST 5216.5 (Series), "Department of the Navy Correspondence Manual" (Available online at: http://neds.daps.dla.mil/Directives/5216_5d.pdf.)
- B. Student text: SECNAVINST 5216.5 (Series), "Department of the Navy Correspondence Manual" (Available online at: http://neds.daps.dla.mil/Directives/5216_5d.pdf.)

III. Instructional Aids

- A. Whiteboard/chalkboard
- B. Computer/projection system and PowerPoint slides or overhead projector and locally-prepared transparencies

IV. Suggested Methods and Procedures

- A. Method options: Recommend covering basic material, especially the Correspondence Manual, and then presenting examples of common types of correspondence for which Midshipmen are responsible at your unit.
- B. Procedural and student activity options:
 - 1. Give students the link to the Correspondence Manual in advance, so they can become familiar with the material ahead of time.
 - 2. Prepare slides with some common correspondence examples.

V. Presentation

- A. Importance of proper correspondence
 - 1. Clear concise directions down chain of command.
 - 2. Avoidance of misunderstandings.
 - 3. Response to tasking from supervisor.

4. A direct reflection of your professionalism.
 - a. Check carefully for proper format.
 - b. Check carefully for spelling and grammatical errors.
- B. Types of Naval Correspondence
 1. Naval Messages (covered in depth in the Leadership & Ethics/Senior Seminar course)
 2. Formal Letters
 3. Memorandums
 4. Electronic Mail
 - a. Less formal modern communication method.
 - b. Still requires proper military etiquette.
 - c. Open with rank and name of individual.
 - d. Close with appropriate salutation.
 - (1) Respectfully -- Abbreviated R/; used for same or lesser ranked personnel.
 - (2) Very Respectfully -- Abbreviated V/R; used for higher ranked personnel.
 - (3) For non-DoD civilians, consider using "Sincerely" to avoid confusion with standard abbreviations above.
- C. Reiterate that SECNAVINST 5216.5 is the official guidance for all Naval correspondence.